

Exhibit D

Part 1 of 2

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

IN RE APPLE IPHONE

ANTITRUST LITIGATION,

Case No. 11-cv-06714

YGR (TSH)

DONALD R. CAMERON, et al.,

Plaintiffs,

vs.

Case No. 19-cv-03074

YGR (TSH)

Apple Inc.,

Defendant.

CONFIDENTIAL PURSUANT TO THE PROTECTIVE ORDER

ZOOM DEPOSITION OF EINER ELHAUGE

(Reported Remotely via Video & Web Videoconference)

Newton, Massachusetts (Deponent's location)

Friday, July 30, 2021

Volume I

STENOGRAPHICALLY REPORTED BY:

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Apple Inc.,

Defendant.

ZOOM DEPOSITION OF EINER ELHAUGE, taken
on behalf of the Defendant, with the deponent
located in Newton, Massachusetts, commencing at
10:05 a.m., Friday, July 30, 2021, remotely
reported via Video & Web videoconference before
REBECCA L. ROMANO, a Registered Professional
Reporter, Certified Shorthand Reporter, Certified
Court Reporter.

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Soseh Kevorkian, Videographer

Luke Martin, Executive Director at Legal
Economics LLC

Sean Morrissey, Concierge Technician

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I N D E X

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DESCRIPTION

Exhibit 21	Expert Class Certification	21
	Report of Professor Einer	
	Elhauge dated June 1, 2021;	
Exhibit 22	Documents Relied Upon for	29
	Expert Class Certification	
	Report of Professor Einer	
	Elhauge (June 1, 2021).	

/////

1 Newton, Massachusetts; Friday, July 30, 2021

2 10:05 a.m.

3 ---o0o---

4 THE VIDEOGRAPHER: Good morning. We're
5 going on the record at 10:05 a.m. on July 30th, 10:05:12
6 2021.

7 This is media unit 1 of the
8 video-recorded deposition of Einer Elhauge, taken
9 by counsel for defendant in the matter of
10 Donald R. Cameron, et al. versus Apple Inc., 10:05:29
11 et al. Case No 4:19-cv-03074-YGR.

12 This deposition is being held by Veritext
13 Virtual via Zoom Web Conferencing. My name is
14 Soseh Kevorkian from the firm Veritext, and I'm the
15 videographer located in Topanga, California. Our 10:05:54
16 court reporter is Rebecca Romano, also from the
17 firm Veritext.

18 At this time, would counsel and all
19 present please identify themselves for the record.

20 MR. SWANSON: Dan Swanson, Gibson Dunn, 10:06:10
21 representing Apple Inc.

22 MS. MANIFOLD: Betsy Manifold, Wolf
23 Haldenstein on behalf of the consumer plaintiffs.
24 And as the deposition continues in -- with --

25 unless there's objection, I plan to mute myself and 10:06:23

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1 to mute my picture. If I ask any questions, I 10:06:28
2 certainly will become visual.

3 MR. LOPEZ: This is Rob Lopez of
4 Hagens Berman for the developer plaintiffs. I'm
5 joined by my colleagues Steve Berman, Ben 10:06:39
6 Harrington and Ben Siegel. And we also have -- or
7 excuse me, Professor Elhauge's colleague Luke
8 Martin on the line as well.

9 MR. PHILLIPS: This is Harry Phillips of
10 Gibson Dunn for Apple. And we also have with us 10:06:55
11 Scott Murray of commercial litigation at Apple.

12 THE VIDEOGRAPHER: Is that all?
13 Okay, Rebecca, whenever you're ready.

14 MS. MANIFOLD: I -- I wanted to ask Rob
15 quickly, may I do an -- if you make an objection 10:07:20
16 without having me to say "Join" every time, I
17 automatically will join the objection. It will
18 make the record cleaner.

19 Do either the developer plaintiffs or
20 Apple have any objection to that? 10:07:32

21 MR. SWANSON: No, no objection.

22 MR. LOPEZ: No objection.

23 MS. MANIFOLD: Thank you, gentlemen.

24 THE COURT REPORTER: Okay. At this time,
25 I will ask counsel to agree on the record that 10:07:33

there is no objection to this deposition officer
administering a binding oath to the deponent via
remote videoconference, starting with the noticing
attorney, please.

10:07:33

5 MR. SWANSON: No objection. 10:07:54

6 MR. LOPEZ: No objection from the
7 developer plaintiffs.

8 MS. MANIFOLD: No objection from the
9 consumer plaintiffs.

10 THE COURT REPORTER: Okay. If you could 10:08:02

11 raise your right hand for me, please.

12 THE DEPONENT: (Complies.)

13 THE COURT REPORTER: You do solemnly
14 state, under penalty of perjury, that the testimony
15 you are about to give in this deposition shall be
16 the truth, the whole truth and nothing but the
17 truth?

18 THE DEPONENT: I do.

19	
20	10:08:02

21

22

23

24

25 // 10:08:17

1 EINER ELHAUGE 10:08:17
2 having been administered an oath, was examined and
3 testified as follows:
4
5 EXAMINATION 10:08:17
6 BY MR. SWANSON:
7 Q. Good morning, Professor Elhauge.
8 A. Good morning.
9 Q. I'm Dan Swanson. I'm representing Apple
10 and I'll be asking the questions for Apple today. 10:08:28
11 Could you please state your full name for
12 the record.
13 A. Einer Elhauge.
14 Q. And what is your business address?
15 A. I work out of my home. So I guess it's 10:08:43
16 227 Temple Street, Newton, Massachusetts 02465.
17 Q. And I take it you have been deposed
18 before?
19 A. I have.
20 Q. Okay. Have you ever gone through a 10:08:56
21 virtual deposition?
22 A. Yes, once before.
23 Q. Okay. So you're -- you're generally
24 familiar with the procedures?
25 A. Yes. 10:09:10

1 Q. All right. And if -- if you are -- or 10:09:10
2 anyone else wants to take a break at any time,
3 please let -- let us know and we'll -- we'll do
4 that. Otherwise, we'll probably take a break
5 every -- every hour or so and then we'll figure out 10:09:23
6 what we'll do around lunchtime.

7 So is -- is there any reason today,
8 Professor, that you can't give full and complete
9 testimony?

10 A. No. 10:09:41

11 Q. Not -- not taking any medications or
12 suffering from any condition that would prevent
13 that?

14 A. No, I am not.

15 Q. Now, your billing rate is \$1,250 an hour; 10:09:52
16 is that right?

17 A. That is correct.

18 Q. Okay. And your consulting firm is Legal
19 Economics L.L.C.; is that right?

20 A. Yes, it is. 10:10:08

21 Q. And are you one of the owners of Legal
22 Economics?

23 A. I'm the sole owner of Legal Economics.

24 Q. Okay. How many hours have you spent on
25 the case, this case to date? 10:10:22

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1 A. I think probably around 300. 10:10:26

2 Q. Okay. And I -- I take it you are
3 assisted by staff at Legal Economics?

4 A. Yes.

5 Q. And how many staff members do you have on 10:10:38
6 the -- on the case?

7 A. Let's see. I know at least four who
8 worked on the case. I'm not sure about the others.

9 Q. Okay. And did I understand that Mr. --
10 Mr. Martin was one of your staff support people? 10:11:05

11 A. Yes.

12 Q. And -- and how has he assisted you?

13 A. He's been one of the case managers on
14 this case, assisting in analyzing the data and
15 drafting portions of the report. 10:11:23

16 Q. Okay. And who -- who were the other
17 three staff members who assisted you in the case?

18 A. Alex Krueger, Rajat Krishna and Joshua
19 Yagi.

20 Q. Mr. Krueger, how -- how has he assisted 10:11:49
21 you?

22 A. He's been a case manager as well. He's
23 focused mainly on the data and he also drafted
24 portions of the report and -- you know, and -- and
25 as well as he and Luke have either reviewed 10:12:05

1 documents or overseen document review. 10:12:09

2 Q. Okay. And Rajat Krishna, how -- how do
3 you spell Rajat's first name?

4 A. R-A-J-A-T, K-R -- so that's the first
5 name. 10:12:23

6 Q. Got it.

7 A. Second name, K-R-I-S-H-A [sic].

8 Q. And what -- what has he done to assist
9 you in the case?

10 A. He's done a lot of document review and 10:12:39
11 drafting and outlining of portions of the report.

12 Q. And then you indicated Joshua -- is it
13 Yagi?

14 A. Yes.

15 Q. -- Yagi had assisted you. What -- what 10:12:50
16 has Mr. Yagi done?

17 A. Yeah, so I -- he did some document work,
18 I think review and organization.

19 Q. And how do you spell his last name?

20 A. Y-A-G-I. 10:13:05

21 Q. All right. Great. Thank you.

22 Do you have an estimate of how much Legal
23 Economics has accumulated by way of charges to the
24 developer plaintiffs so far in this case?

25 A. Yes. 10:13:27

1 Q. And -- and what's your estimate? 10:13:28
2 A. About \$2 million.
3 Q. Thank you.
4 Professor, do you have a -- a Ph.D. or a
5 master's degree in any subject? 10:13:43
6 A. No, I do not.
7 Q. You're a lawyer, correct?
8 A. Among other things, yes.
9 Q. And are -- are you a member of the
10 Massachusetts Bar? 10:13:55
11 A. I am.
12 Q. Do you practice law?
13 A. No, other than I guess sometimes I join
14 amicus briefs. But I'm not engaged in the practice
15 of law actively, no. 10:14:07
16 Q. Okay. And you are a full professor at
17 Harvard Law School; is that right?
18 A. I am.
19 Q. Okay. You indicated in your report,
20 which we'll get to in a moment and mark as an 10:14:19
21 exhibit, that you've served as an expert witness on
22 antitrust economics before competition agencies in
23 the U.S., EC, Korea and Brazil.
24 Did any of those matters concern Apple?
25 A. No. 10:14:39

1 Q. Did any of them concern Google? 10:14:41

2 A. So what -- what's the statement you're

3 looking at? Oh, by the way, since -- I got a

4 message beforehand that it was okay to have access

5 to my report. 10:14:57

6 Q. Yes.

7 A. So I do have a PDF of it up on a screen

8 if that's okay.

9 Q. Sure. No, that's perfectly fine.

10 A. Okay. 10:15:05

11 Q. If you want to have that, you can have

12 one and that's fine, too.

13 A. I have a hard copy too, but it's easier

14 to search for stuff like -- you used the word

15 "Brazil," I think, was one of them. 10:15:14

16 Q. Okay. Yeah. It's page 17, paragraph 25.

17 A. Okay. Okay. Did any of those cases

18 involve -- okay. I'm sorry. What was the question

19 again? I forgot now.

20 Q. No, no problem. 10:15:35

21 Did -- did any of those competition

22 agency matters concern Google?

23 A. Yes.

24 Q. And -- and which agency that you appeared

25 before, did that Google connection arise with 10:16:02

1 respect to? 10:16:08

2 A. I think both the -- the Department of
3 Justice and the FTC.

4 Q. Okay. And when -- when was your either
5 appearance or submission to these agencies? 10:16:23

6 A. I don't know the exact date. It was over
7 six years ago.

8 Q. Okay. And what -- what was the matter
9 that related to Google that -- that occasioned
10 your -- your appearance or submission? 10:16:42

11 MR. LOPEZ: Professor, let -- let me --
12 Professor, let me interject here. If at any time
13 during this line of questioning or at all you're
14 concerned about any third-party confidentiality
15 commitments, please state that on the record and -- 10:16:54
16 and we can deal with that.

17 THE DEPONENT: Yes. I was just about to
18 say these were confidential matters. So there are
19 no public reports filed in them. So I can't really
20 discuss the substance of the cases. 10:17:09

21 MS. MANIFOLD: And at this point I just
22 wanted to state for the record that I join in the
23 developer plaintiffs' objections. So without
24 interrupting any further, the assumptions should be
25 that the -- the consumer plaintiffs join any 10:17:24

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1 objections by Mr. Lopez. Thank you. 10:17:29

2 Q. (By Mr. Swanson) Did -- did the matters
3 that we're speaking of relate to apps or app
4 stores?

5 A. No. 10:17:47

6 Q. Did the matters relate to advertising?

7 MR. LOPEZ: Again, caution, Professor,
8 as -- as merited.

9 THE DEPONENT: No.

10 Q. (By Mr. Swanson) Did -- did the matters 10:18:05
11 relate to search?

12 A. So I think because if you keep asking
13 everything, that's going to get into revealing
14 confidential information. So I'm going to have to
15 decline to answer that without asking Google 10:18:18
16 whether they want to intervene.

17 MR. LOPEZ: And so we'll object
18 accordingly.

19 Q. (By Mr. Swanson) This was a
20 representation where you were acting on behalf of 10:18:29
21 Google?

22 A. Yes.

23 Q. Was that the first time you had -- had
24 a -- a matter where you were acting for or retained
25 by Google? 10:18:41

1 MR. LOPEZ: Same caution. 10:18:47

2 THE DEPONENT: Yeah. Well, sort of
3 acting on behalf of, yes. Google did fund some
4 research I did on the Google Books case and also
5 another one on patent -- patent holdups in 10:19:09
6 standard-essential patents. So -- and I -- the
7 Google Books case was the first, I think, time I
8 ever had any work of any sort funded by Google, and
9 that was -- but I don't remember the order of the
10 other cases and work. 10:19:34

11 MR. LOPEZ: At this time we'll designate
12 the deposition transcript as confidential pursuant
13 to the protective order in the matter.

14 MR. SWANSON: The -- that -- there's a
15 procedure for doing that in considering ex post 10:19:47
16 what actually remains designated, correct,
17 Mr. Lopez?

18 MR. LOPEZ: I'm sorry. I didn't -- is
19 there a question Mr. Swanson? I didn't hear.

20 MR. SWANSON: Yeah, I -- I -- are you 10:20:01
21 designating this particular Q and A as confidential
22 or are you just invoking the general provision of
23 the protective order that allows you a certain
24 period of time to keep the transcript confidential
25 until you guys -- 10:20:17

1 MR. LOPEZ: Oh, thank you. The latter. 10:20:19

2 MR. SWANSON: Okay.

3 MR. LOPEZ: The latter for now, right,
4 yes.

5 MR. SWANSON: Yep. Understood. 10:20:24

6 Q. (By Mr. Swanson) Professor, so you had a
7 engagement, if we can call it that, with Google
8 related to Google Books that's the first instance
9 that you recall. There was a -- a matter involving
10 the FTC and the DOJ. 10:20:43

11 Are there any other -- and then -- and
12 then the patent holdup paper or research. Any
13 other matters that you can recall where you have
14 been engaged by Google?

15 A. There may have been one other, but I 10:21:06
16 don't think I actually represented them before an
17 agency in that one. I was just giving --
18 consulting directly with them.

19 Q. And -- and are you still engaged on some
20 matter with -- with Google? 10:21:24

21 A. No. As I said, I haven't done anything
22 with Google since, any work for Google since 2014.

23 Q. Okay. Thank you.

24 When were you engaged in this matter by
25 or on behalf of plaintiffs as a potential expert? 10:21:50

1 A. Last summer, I think. 10:21:54

2 Q. Okay. And who -- who retained you?

3 A. Hagens Berman firm.

4 Q. Okay. And -- and who -- was there a

5 particular lawyer that you interacted with in 10:22:09

6 connection with that engagement?

7 A. I think it was mainly Ben Siegel, if I

8 recall correctly.

9 Q. Are you aware that one of the named

10 plaintiffs in this case is also suing Google 10:22:23

11 concerning an alleged monopolization of an Android

12 app distribution market?

13 A. I'm not aware, no.

14 Q. Okay. So you haven't been retained in

15 that litigation? 10:22:38

16 A. I have not.

17 Q. Have you had any communications with any

18 of the named plaintiffs in this case?

19 A. No, I have not.

20 Q. Do you know -- do you know who they are? 10:22:49

21 A. I -- one of them -- Mr. Cameron, I guess,

22 but other than that, no.

23 Q. Okay.

24 MR. SWANSON: Why don't we mark your

25 expert report for the record as an exhibit. That 10:23:04

1 means that Mr. Phillips will have to work some 10:23:11
2 magic on getting the -- the document brought up.
3 Just you can continue to use your other copy,
4 Professor, but we do need to validate this document
5 as your expert report. I think it would bear the 10:23:25
6 exhibit number 21.

7 (Exhibit 21 was marked for identification
8 by the court reporter and is attached hereto.)

9 MR. SWANSON: So we'll -- once that is --
10 and while that's coming up, I'll indicate that the 10:23:38
11 document that we're marking as Exhibit -- or will
12 in due course by our court reporter be confirmed as
13 Exhibit 21. It is a multi-page document, 249
14 pages, first page of which bears the title Expert
15 Class Certification Report of Professor Einer 10:24:00
16 Elhauge dated June 1st, 2021.

17 Q. (By Mr. Swanson) So once that is -- and
18 you've had a chance to look at it, I'd just like
19 you to confirm that that is your expert report.

20 CONCIERGE TECHNICIAN: Mr. Swanson, is 10:24:32
21 this Tab 1, you said?

22 MR. SWANSON: This is Tab 1, and it's --
23 it's --

24 MR. PHILLIPS: It's -- it's been -- it's
25 been introduced as Exhibit 21. It's in the -- it's 10:24:40

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1 in the marked exhibit folder. 10:24:43

2 THE DEPONENT: How do you move pages?

3 Oh, okay. Got it. Never mind.

4 It -- it looks like my report. Obviously
5 we can't -- can't read through all 250 pages and 10:25:00
6 confirm it's all word for word the same, but it
7 would certainly appear to be my report.

8 Q. (By Mr. Swanson) Okay. Well, if -- if
9 anyone has any concerns, speak up. But that's what
10 we understand it to be. And although you'll be 10:25:13
11 working from your PDF copy, they should be
12 identical. If they aren't, I think I'd be the
13 first one to want to know it. You'd be the second.

14 Professor, did -- did -- did you draft
15 the report? 10:25:37

16 A. I -- like I said, my process is I
17 participate with staff to create the outline. They
18 do initial drafting and then I redraft and redraft,
19 go back and forths. So in the end every paragraph
20 is mine. Every word is, you know, reviewed and 10:25:56
21 either changed by me or, you know, verified by me.
22 So -- you know, and we're many, many, many rounds,
23 so I am certainly -- to me it's my written product,
24 but I do use staff to do initial drafting and
25 collecting the documents and citations and the data 10:26:17

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1 and the like. 10:26:20

2 Q. Have you reviewed the plaintiffs'
3 complaint or at least the current operative
4 complaint in this case?

5 A. I -- well, I was going to say yes, but 10:26:31
6 now when you use the word "current operative
7 complaint," now I wonder is there -- whether the
8 version I saw is no longer -- was there a change?

9 I -- I have seen a complaint.

10 Q. Yes. 10:26:47

11 A. So I can say that.

12 Q. Okay. And -- and do you recall when you
13 reviewed that?

14 A. I think it was last summer.

15 Q. Okay. And what -- what do you understand 10:26:57
16 to be the plaintiffs' claim of wrongdoing by Apple
17 in this case?

18 A. I think it's monopolization, if I recall
19 correctly.

20 Q. Okay. If you could turn to paragraph 1 10:27:19
21 of your report on page 6.

22 A. Okay.

23 Q. In the second sentence there, you say,
24 "Plaintiffs allege that 'Apple has never permitted
25 anyone else to distribute apps and related digital 10:27:38

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1 products to the many millions of U.S. owners of its 10:27:41
2 mobile devices' and that this allows Apple 'to
3 charge developers a supracompetitive 30 percent
4 commission on the sale of paid apps and in-app
5 products.'" 10:27:57

6 Do you see that?

7 A. Yes.

8 Q. Is that your understanding of the core
9 assertion of the plaintiffs in this case?

10 A. Well, I don't know if I -- whether I 10:28:10
11 would characterize it as core versus not core.
12 That's certainly some of the allegations that
13 they've made. But there's other specific
14 allegations as well. And I think they are
15 currently I think also claiming that the 15 percent 10:28:30
16 commission is also supracompetitive. So I would
17 just say these are certain allegations. I don't
18 know if they're the core ones.

19 Q. What is your understanding of the means
20 by which plaintiffs contend that Apple has never 10:28:43
21 permitted anyone else to distribute apps and
22 related digital products to iOS device users?

23 A. Oh, a variety of exclusivity restraints
24 that I detail in -- I think it's Part 3 of -- of my
25 report, but are also discussed in the complaint. 10:29:02

1 Q. And do you understand that plaintiffs are 10:29:10
2 alleging that Apple excluded competition by
3 requiring developers to submit their iOS apps to
4 the App Store?

5 A. No. I don't understand that to be the 10:29:28
6 restraint. I understand that to be the restraint
7 on distribution, not on whether you can run on
8 or -- or safe enough or approved to run on the
9 iOS system.

10 Q. Did you understand plaintiffs to be 10:29:44
11 alleging that Apple excluded competition by
12 requiring the use of its in-app payment
13 functionality for digital transactions?

14 A. Yes.

15 Q. Are you offering any opinion about 10:30:02
16 whether Apple has excluded competition by requiring
17 the use of its in-app payment functionality?

18 A. Well, I -- you know, I opine that they
19 have excluded rivals from the combination of
20 app -- iOS app distribution and in-app purchases. 10:30:20
21 I don't opine on whether those are -- whether
22 there's a separate market.

23 Q. A separate market for in-app payment
24 functionality?

25 A. Yes. 10:30:39

1 Q. In other words, you don't opine as to 10:30:40
2 whether there is a tie of that functionality?

3 A. Yes. I don't opine on whether or not
4 there's a tie of the initial app distribution to
5 the in-app purchases or whether they're single 10:30:55
6 products or really the exclusion from the former
7 sort of carries over to the exclusion of the
8 latter. Although I do detail there are particular
9 restraints to make sure that rivals are excluded
10 from the -- you know, the combination of the two, 10:31:12
11 and those are part of the exclusivity restraints.

12 But as I say in my report, my conclusions
13 all hold whether or not they're separate products
14 and whether or not they're tied, so I don't take
15 any position on that issue. 10:31:26

16 Q. Is it your understanding that there is a
17 claim in the plaintiffs' complaint of tying of the
18 in-app payment functionality?

19 MR. LOPEZ: Object to the form.

20 THE DEPONENT: Well, I guess that's more 10:31:44
21 of -- to me that's a legal question and I am not
22 really here to opine about legal issues.

23 Q. (By Mr. Swanson) No, it's a question
24 about your understanding. You know, I'm asking
25 about your understanding based on what you did to 10:31:56

1 write your report. 10:32:00

2 MR. LOPEZ: Same objection.

3 THE DEPONENT: So, I mean, to write the

4 report, I answered the questions, as -- I -- I

5 point out in paragraph 2, counsel asked me to 10:32:11

6 address. In terms of my reading of the complaint,

7 it does allege these restraints on in-app

8 purchasing, so I guess you -- you could construe

9 those as tying claims.

10 Q. (By Mr. Swanson) Do you understand 10:32:36

11 plaintiffs to be alleging that Apple excluded

12 competition by prohibiting developers from telling

13 consumers inside the developers' apps that

14 consumers can pay for in-app digital products

15 outside the app? 10:32:50

16 A. I think that's part of the restraint,

17 yes, that the antisteering provisions reinforce the

18 other exclusivity restraints.

19 Q. Do plaintiffs allege that

20 supracompetitive commissions resulted from the 10:33:02

21 antisteering provisions?

22 A. Could you restate that?

23 Q. Do plaintiffs allege that supra- -- let's

24 just make that clear, S-U-P-R-A -- -competitive

25 commissions resulted from the antisteering 10:33:22

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1 provisions? 10:33:25

2 A. I don't think they make an allegation
3 about that in isolation, but they make an
4 allegation that the combination of the exclusivity
5 restraints did cause supracompetitive commissions. 10:33:36

6 Q. Do you -- do you understand the
7 plaintiffs to be alleging that any single alleged
8 restraint in that combination caused
9 supracompetitive commissions?

10 MR. LOPEZ: Object to form. 10:33:55

11 THE DEPONENT: I -- I -- I don't recall.
12 I would have to go back and look back at the
13 complaint to see any -- whether any language could
14 be so construed.

15 Q. (By Mr. Swanson) Okay. Is -- is it your 10:34:07
16 opinion that any one of that combination of
17 restraints caused supracompetitive commissions?

18 A. Well, I guess yes. I think the -- the
19 exclusivity restraints that I describe in
20 paragraph -- Part 3, I think, would suffice to 10:34:29
21 create supracompetitive effects. But they were
22 reinforced by the tie that I describe to the --
23 different tie to -- to -- to mobile devices I
24 discuss in the other part, Part 3, and also
25 reinforced by the antisteering provisions. But I 10:34:50

1 do think that just the -- the -- just the simple 10:34:56
2 exclusivity restraints prohibiting developers from
3 distributing iOS apps outside of Apple's
4 App Stores would suffice to create the
5 supracompetitive commissions. 10:35:13

6 Q. Do you understand plaintiffs to be
7 alleging that Apple excluded competition by
8 requiring developers to price their paid digital
9 products using 99-cent price steers?

10 A. I -- I don't have that understanding, no. 10:35:27

11 MR. SWANSON: All right. Let's now mark
12 as Exhibit 22 a document that, as I understand it,
13 list your relied-upon materials that will be
14 brought up in the exhibit room or -- or section.

15 (Exhibit 22 was marked for identification 10:36:00
16 by the court reporter and is attached hereto.)

17 MR. SWANSON: For the record, it is a
18 multi-page document, appears to be 17 pages,
19 entitled Documents Relied Upon for Expert Class
20 Certification Report of Professor Einer Elhauge, 10:36:14
21 June 1, 2021.

22 Q. (By Mr. Swanson) When that pops up, if
23 you could confirm that that is, indeed, your
24 relied-upon list of materials.

25 A. I believe so, yes. 10:36:38

1 Q. Okay. So does Exhibit 22 identify, to 10:36:39
2 the best of your knowledge, all documents and
3 information that you relied on in connection with
4 forming the opinions in your report?

5 A. Yes. 10:36:53

6 Q. Okay. Would you flip to page 3.

7 A. Okay.

8 Q. Are these ten depositions at the top of
9 page 3 the only depositions you rely on for your
10 opinions? 10:37:10

11 A. Yes.

12 Q. Did you review the deposition testimony
13 of any Epic fact witness?

14 MR. LOPEZ: Object to the form.

15 THE DEPONENT: Not -- not that I can 10:37:25
16 recall.

17 Q. (By Mr. Swanson) Did you review the
18 deposition of any expert witness in the Epic case?

19 A. I don't believe so, no.

20 Q. You don't list any testimony from the 10:37:48
21 Epic trial here in this document, do you?

22 A. Hm. I don't -- let's see. I could have
23 sworn -- well, that is an oversight. I'm sorry if
24 I didn't. It -- it does seem like in footnote 275
25 I do cite the trial transcript for Mr. Cook's 10:38:29

1 testimony. 10:38:34

2 Q. So you reviewed Mr. -- Mr. Cook's
3 testimony from the Epic trial?

4 A. I did yes.

5 Q. And you rely on it at least to the extent 10:38:44
6 of footnote 275?

7 A. Yes.

8 Q. Did you review and rely on any other
9 written or oral trial testimony in the Epic case?

10 A. I'm sorry. Can you say that again. 10:39:04

11 Q. Did you review and do you rely on any
12 other written or oral trial testimony in the Epic
13 case?

14 A. No, I didn't review. And my -- my staff
15 helped me review a lot of it and so I heard about 10:39:21
16 some of it through them, but I didn't review the
17 trial transcripts or rely on them for anything
18 else, I don't think.

19 Q. Did you consider it unimportant for you
20 to personally review the testimony from the Epic 10:39:38
21 trial?

22 A. No, I didn't consider it unimportant.
23 But, you know, in a case like this where you've
24 got, you know, hundreds of thousands of -- of
25 documents and lots of things to look at and a 10:39:53

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1 limited amount of time and, you know, budget, I 10:39:56
2 can't really look at every single document. I have
3 to rely on staff to screen them and bring the
4 important parts to my attention.

5 Q. And -- and if there were important parts 10:40:11
6 you would have relied on them?

7 MR. LOPEZ: Objection to form.

8 THE DEPONENT: Yes, if they were relevant
9 to my analysis, either, you know -- or -- or cut
10 against it, I would have reviewed it and, you know, 10:40:26
11 considered it. But, you know, I -- I cite in the
12 report everything that I relied on for the
13 particular proposition I rely on it for.

14 Q. (By Mr. Swanson) Still on Page 3 of
15 Exhibit 22 in the middle there, the list of expert 10:40:46
16 reports, are those -- is that the full list of
17 expert reports you reviewed in connection with this
18 matter?

19 A. As of that time, yes.

20 Q. And since then, have you reviewed and 10:41:06
21 relied on additional expert reports?

22 A. Oh. Actually, I -- I didn't see
23 Economides there. What I was thinking of was I
24 have seen Professor Economides' report after he
25 filed it, so I -- I guess that's already listed 10:41:27

1 though. Yes, so that's the full list then. 10:41:29

2 Q. Okay. As for the -- we'll get to
3 Professor Economides' report, but as for the list
4 on page 3 of expert reports, did you review in each
5 case the full report? 10:41:45

6 A. No, I didn't read the entire reports, no.

7 Q. Okay. I take it then you didn't review
8 the written or oral trial testimony of any of these
9 experts?

10 A. No, other than in the sense that, you 10:42:07
11 know, my staff sometimes would orally summarize
12 what they were saying in the trial.

13 Q. But -- but if -- if there had been
14 something that had been orally summarized for you
15 that you were relying on, you would have indicated 10:42:20
16 that?

17 A. Yeah. So I think -- yes. I mean,
18 really, it just -- as far as I could tell every
19 time, it was -- it was just something that was in
20 one of these reports anyway. So it was just -- you 10:42:31
21 know, it was -- it was just plain out in the trial
22 transcript, but they had everything in the reports
23 already.

24 Q. Did you review the expert report of Ned
25 Barnes in the Epic case? 10:42:50

1 A. That name is not striking a chord. 10:42:58

2 Q. Okay. With respect to the list of

3 Bates-stamped documents, starts on page 3, goes to

4 page 4 of Exhibit 22, are these the only

5 Bates-stamped documents that you are relying on for 10:43:16

6 your opinions?

7 A. Yes, I believe so.

8 Q. Did you -- did you review each of these?

9 A. Yes.

10 Q. Okay. And how did you decide which Bates 10:43:27

11 stamped documents that you were going to rely on?

12 A. Through the drafting process, you know,

13 I -- in the -- throughout the drafting process

14 either I ask a question, do we have support for

15 this, what's the answer to this, can somebody 10:43:48

16 investigate why, and then my staff would, in the

17 next draft of the report, include citations to

18 documents that they thought bore on the questions

19 that I had or might insert them in, you know,

20 sections that they are drafting and then I would 10:44:02

21 look at that portion of the document and --

22 you know, to see whether I -- I agreed that it

23 supported or whatever the point we were making.

24 MR. LOPEZ: Professor, I'm going to

25 caution you at this point not to reveal any 10:44:19

1 communications with your staff or other experts. 10:44:21

2 Q. (By Mr. Swanson) Professor, did you rely
3 on any interviews of or communications with any of
4 the named plaintiffs?

5 A. I don't believe so, no. 10:44:40

6 Q. Do you rely on any interviews of or
7 communications with other developers?

8 A. I don't recall any. If -- if there -- if
9 it's not said in my report, no. Whether there was
10 some developer that had some sort of interview or 10:44:59
11 testimony that I'm forgetting about, I -- I'm not
12 sure.

13 Q. If -- if there were such testimony or
14 interview, you would note it in your report, you
15 believe? 10:45:16

16 A. Yes.

17 Q. Did you interview anyone at all in
18 connection with the case?

19 A. No. Not me personally, no.

20 Q. Were there any assumptions provided to 10:45:27
21 you by counsel that you rely on in forming your
22 opinions?

23 A. I don't think so, no.

24 Q. You mentioned you rely on the expert
25 report of Professor Economides, right? 10:45:55

1 A. Yes, I -- I -- I do rely on it and -- 10:45:59

2 for -- for certain points, yes.

3 Q. Okay. And -- and you're relying on his
4 final report as opposed to any kind of draft; is
5 that correct? 10:46:11

6	A. Yes.
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7 Q. Okay. Are you relying on the expert
8 report of Mr. Tregillis?

9 | A. I don't think so.

10	Q. Have you reviewed Mr. Tregillis' report?	10:46:23
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11	A.	No.
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12 Q. Are you aware of Mr. Tregillis' report?

13	A. Not by that name.
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14 Q. Have -- have you reviewed the motion made
15 by the developer plaintiffs to certify the class as 10:46:42
16 a class action, for the case as a class action?

17 A. I have -- I have seen that, yes.

18 Q. Okay. Did -- And I'm not asking for you
19 to communicate any substance, but did you or staff
20 working under your direction communicate with 10:47:06
21 Professor Economides or his staff prior to
22 submitting your report?

23 THE DEPONENT: Am I allowed to answer
24 that question, Rob?

25	MR. LOPEZ: Carefully. Just again,	10:47:25
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1 none -- none of the substance. 10:47:25

2 THE DEPONENT: Okay. So

3 Professor Economides uses staff at Legal Economics

4 as well. So, you know, I -- generally a -- a

5 different staff member Thor Sletten. So we -- but 10:47:36

6 we do have the same firm doing support staff work

7 for us.

8 Q. (By Mr. Swanson) Okay. Did -- and,

9 again, I am not asking what you talked about, but

10 did you communicate with Professor Economides 10:47:53

11 before your respective reports were submitted?

12 A. I think we had one brief conversation

13 about this case before the reports were submitted.

14 Q. Have you communicated with any experts

15 retained by Epic concerning any of the litigation 10:48:21

16 against Apple?

17 A. No, I have not.

18 Q. Okay. Have you communicated with anyone

19 with the law firm of Cravath, Swaine & Moore with

20 respect to this case? 10:48:41

21 A. No, I have not.

22 Q. Have you reviewed the expert report

23 submitted on behalf of the consumer plaintiffs by

24 Professor McFadden?

25 A. I have seen that since this report. But, 10:48:55

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1 yes, I've looked at that. 10:48:57

2 Q. Did you review the entire report?

3 A. No.

4 Q. Were there specific parts of the report

5 you focused on? 10:49:08

6 A. Yes.

7 Q. And what -- what parts did you

8 specifically focus on?

9 A. The -- the pass-through analysis.

10 Q. Is there a reason that you focused on 10:49:19

11 Professor McFadden's pass-through analysis?

12 A. Because I figured it might come up in

13 this deposition about whether or not it might be

14 relevant to some of my opinions since I --

15 you know, in -- in the report I talk about the 10:49:37

16 possibility of a pass-through, but don't do any --

17 I don't provide an affirmative economic analysis of

18 it. In the reports I was interested in what

19 Professor McFadden had done with that.

20 Q. And after reviewing it, did you conclude 10:49:54

21 that what Professor McFadden had done was relevant

22 to some of your opinions?

23 MR. LOPEZ: Objection to form.

24 MS. MANIFOLD: Objection.

25 THE DEPONENT: I -- it -- how would I put 10:50:08

1 it? I don't think the pass-through issue is at all 10:50:19
2 relevant to my opinions, but I think if one
3 incorrectly thought that it was, then
4 Professor McFadden's opinions coincided with my own
5 about some aspects about the -- the likely small 10:50:39
6 size of any pass-through that might occur.

7 Q. (By Mr. Swanson) And what was your
8 understanding of how much pass-through Professor
9 McFadden concluded did occur?

10 MS. MANIFOLD: Objection. 10:51:01

11 MR. LOPEZ: Same --

12 THE DEPONENT: Well, I didn't mean to
13 focus on --

14 MR. LOPEZ: Same objection.

15 THE DEPONENT: So I wasn't focusing on 10:51:05
16 the quantification rather than formula, so -- he
17 basically provided at the same formula that,
18 you know, I confirmed with my own analysis that
19 indicated that the level of the pass-through would
20 be proportionate to marginal cost for app 10:51:24

21 developers and that since marginal costs were very
22 small, that indicated that it would be a very small
23 percentage could -- could be passed through. And
24 particularly with 99-cent price tiering, which I
25 mentioned in my report, on that Professor McFadden, 10:51:51

1 I think, reached a different conclusion because 10:51:54
2 the -- in that case they are challenging, if I
3 understand correctly, the 99-cent tiering as well.
4 Whereas as I say in my report, I think given -- if
5 you combine that economics with the price tiering, 10:52:08
6 it seemed to me that it's very unlikely to result
7 in any pass-through if -- if -- if the 99-cent
8 tiering remains.

9 Q. (By Mr. Swanson) Is it your opinion
10 personally that marginal costs for Apple developers 10:52:30
11 are very small?

12 A. Yes, generally, yes.

13 Q. And it's your understanding that
14 Professor McFadden agrees with that?

15 MS. MANIFOLD: Objection. 10:52:47

16 MR. LOPEZ: Object as well.

17 THE DEPONENT: I -- I don't know if he
18 agrees with that characterization or not. I think
19 he discusses some of them and some of them have
20 higher marginal costs than others. So the -- I 10:52:57
21 just only looked at his -- as I -- like I say
22 again, as a sort of third-level alternative issue
23 to my report, since the -- I think the pass-through
24 issue is not relevant to the existence of harm to
25 the developers in the first place. 10:53:14

1 But -- but I am not relying on him for 10:53:16
2 any assessment that marginal costs are generally
3 small. I'm relying on my own understanding of,
4 you know, the -- that -- the -- that there's not
5 much marginal cost to just, once you have the app, 10:53:27
6 giving somebody another copy of the app.

7 Q. (By Mr. Swanson) You had just indicated
8 that it's very unlikely that there will be
9 pass-through if the 99-cent tiering remains, given
10 your understanding about marginal cost. Can you 10:53:47
11 explain why that is the case, why -- why 99-cent
12 tiering is important to that conclusion?

13 A. Sure.

14 MS. MANIFOLD: Objection.

15 THE DEPONENT: So -- I mean, if you have 10:54:04
16 an app itself, say, for 99 cents, you -- to
17 increase the price, you have to increase it to
18 \$1.99. So that's a 100 percent increase. So
19 obviously, you know -- and -- and the difference in
20 commission that we're talking about here is maybe 10:54:20
21 14, 15 percent. It's just not possible that that's
22 going to prompt 100 percent pass-through and so --
23 and thus -- I mean, not -- not possible that's
24 going to prompt, you know, I guess a price increase
25 that is -- we're talking about six or seven times 10:54:40

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1 the magnitude of any commission difference. 10:54:43

2 If you get the higher price, let's say

3 it's 4.99, you'd need a 20 percent increase to go

4 to the next level of 5.99. So if you combine that

5 with the fact that marginal costs are low, and you 10:54:56

6 assume, I don't know, if marginal costs are around

7 10 percent, a sort of back-of-the-envelope

8 calculation would suggest that a 15 percent

9 commission change could maybe raise prices by

10 2 1/2 percent and it's very unlikely -- you'd have 10:55:12

11 to be at a very high price for the difference

12 between one 99-cent tier and the next 99-cent tier

13 to be 2 1/2 percent.

14 So I conclude from that that even if

15 pass-through were relevant to the opinions in my -- 10:55:33

16 in this -- that I offer in this case, it's likely

17 to be -- it's -- it's very unlikely, given the

18 combination of the market conditions and the -- the

19 tiering.

20 Q. (By Mr. Swanson) If pass-through is very 10:55:49

21 unlikely, does that imply that in the but-for

22 world, app prices are unlikely to change?

23 MS. MANIFOLD: Objection.

24 THE DEPONENT: Yes. I think app prices

25 are unlikely to change in the but-for world, but if 10:56:09

1 they do change, it only accentuates the amount of 10:56:14
2 harm to developers.

3 Q. (By Mr. Swanson) And -- and that opinion
4 applies to all tiers, Professor, or -- or just the
5 subset of tiers? 10:56:34

6 MS. MANIFOLD: Objection.

7 THE DEPONENT: I think it's generally
8 unlikely. I mean, as I say, since -- since the
9 degree of pass-through does not actually alter any
10 of my opinions, I -- I -- I have not done any 10:56:45
11 empirical analysis of exactly what -- exactly how
12 often pass-through might occur. I just think it's
13 generally unlikely, given the combination of the
14 percentage-based commissions and the low marginal
15 costs and price tiering. 10:57:05

16 Q. (By Mr. Swanson) Did -- well, Professor,
17 was there anything that you saw in
18 Professor McFadden's report that you disagreed
19 with?

20 MS. MANIFOLD: Objection. 10:57:19

21 MR. LOPEZ: I'll object as well.

22 THE DEPONENT: I can't recall anything I
23 disagreed with and I looked at in his report.

24 Q. (By Mr. Swanson) Okay. Was there
25 anything in Professor McFadden's report that caused 10:57:27

1 you to reconsider any of your own opinions? 10:57:30

2 A. No.

3 Q. Aside from your staff and plaintiffs'
4 counsel, have you discussed the opinions in your
5 report with anyone? 10:57:47

6 A. No. Well, other than with you right now,
7 I guess.

8 Q. Well, I appreciate that.

9 All right. Let's talk a bit about market
10 definition. 10:58:08

11 It -- it's your opinion that Apple's
12 alleged conduct is anticompetitive and unjustified,
13 correct?

14 A. Yes.

15 Q. Does that opinion depend upon the 10:58:21
16 definition of the relevant market?

17 A. I am not positive it does. It may be the
18 direct evidence of anticompetitive effects would be
19 enough and you don't necessarily have to define a
20 market. You can even for market power from the 10:58:50
21 high prices. So I guess I wouldn't say that the
22 opinions necessarily depend upon the market
23 definition.

24 Q. Is the conduct, the alleged conduct that
25 you analyzed, vertical in nature? 10:59:09

1 A. Yes. 10:59:12

2 Q. Do you agree that without an accurate
3 definition of the market, there is no way to
4 measure Apple's ability to lessen or destroy
5 competition? 10:59:33

6 A. No, I don't agree that there's no way to
7 measure it without defining the market.

8 Q. Do you agree that absent an accurate
9 definition of the relevant market, an economist
10 can't accurately assess whether the defendant has 10:59:46
11 monopoly power?

12 MR. LOPEZ: Object to the form.

13 THE DEPONENT: No. I thought it seemed
14 very helpful, but I don't agree that you can never
15 assess the existence of monopoly power without 10:59:58
16 defining the market. Not as a matter of -- I'm not
17 testifying as a matter of economics on all this,
18 not for the matter of law, since I'm not opining on
19 legal issues.

20 Q. (By Mr. Swanson) Understood. 11:00:11

21 Do you agree that absent an accurate
22 definition of the relevant market, an economist
23 can't accurately assess whether challenged conduct
24 is anticompetitive?

25 MR. LOPEZ: Object to the form. 11:00:24

1 THE DEPONENT: No. Again, I -- I think 11:00:25
2 it's highly relevant, but I think as a matter of
3 economics you can access whether conduct is
4 anticompetitive sometimes without defining the
5 relevant market. 11:00:36

6 Q. (By Mr. Swanson) Well, without an
7 accurate definition of the relevant market, can an
8 economist accurately assess whether vertical
9 conduct is anticompetitive?

10 MR. LOPEZ: Object to the form. 11:00:48

11 THE DEPONENT: Yes. I think you
12 sometimes can. You can show -- with direct proof
13 of anticompetitive effects, you don't need
14 necessarily to find a relevant market because the
15 main point of defining a relevant market is to draw 11:01:02
16 inferences about power and effects. So if you have
17 direct proof of power and direct proof of effects,
18 I don't think you necessarily need to define a
19 relevant market, although I, in fact, do define a
20 relevant market, and I think it is often quite 11:01:17
21 helpful to figure out the competitive paradigm --
22 parameters.

23 Q. (By Mr. Swanson) Do you agree that
24 absent an accurate definition of the relevant
25 market, an economist can't accurately assess 11:01:27

1 whether there are procompetitive business 11:01:31

2 justifications for challenged conduct?

3 MR. LOPEZ: Object to the form.

4 THE DEPONENT: No, I don't think defining

5 relevant market is always necessary to determine 11:01:39

6 whether there's procompetitive justifications.

7 Q. (By Mr. Swanson) Now, it's your opinion,
8 is it not, that the relevant product market in this
9 case is the market for iOS app and digital in-app
10 purchase distribution services? 11:01:57

11 A. Yes. And I -- although just -- the
12 caveat is I don't draw any conclusion about whether
13 one could further divide that into submarkets for
14 the iOS app distribution and the IAP
15 distribution. 11:02:13

16 Q. You're not drawing any conclusion as to
17 whether or not those are separate products, I take
18 it?

19 A. Right. I think that -- that there's --
20 they're clearly one -- there is a market for them 11:02:23
21 in combination. Whether there are also submarkets
22 for them I do not opine.

23 Q. Are you defining the relevant market in
24 the actual world or the but-for world?

25 A. Both. 11:02:45

1 Q. So all of the aspects of the relevant 11:02:48
2 market are present and observable in the actual
3 world, the relevant market as you've defined it?

4 A. I don't know. I'd have -- I'd have to
5 think more about that. When you say they're all 11:03:08
6 observable, just as -- as a matter of linguistics,
7 you can't really observe things that are in the
8 but-for world. But I think the evidence here that
9 does define the relevant market as iOS apps and IAP
10 distribution services. So I think that -- that 11:03:35
11 evidence does exist. Whether all aspects are
12 observable that would exist in the but-for world, I
13 think that's a more difficult question.

14 Q. Well, are there aspects of your relevant
15 market definition that do not presently exist? 11:03:50

16 A. I -- I'm not even sure. I don't even
17 know what that means. Can you clarify?

18 Q. Well, is your relevant market description
19 an accurate description of the world today?

20 A. Yes. 11:04:18

21 Q. Okay. Your relevant market includes
22 distribution services for both iOS apps and
23 digital in-app purchases, correct?

24 A. Yes.

25 Q. Okay. Let's take a look at your report, 11:04:34

1 Exhibit 21, at page 3, paragraph 3. 11:04:45

2 A. Page -- there must be something different
3 in my pagination because I have --

4 Q. Oh, I'm sorry. It's -- paragraph --
5 paragraph 3 is on page 7, I think. 11:05:02

6 A. Okay.

7 Q. I'm sorry.

8 A. Okay. You said paragraph. Maybe I
9 missed --

10 Q. Yeah, paragraph -- yeah, I'm sorry. I 11:05:11
11 had -- I had it wrong in my notes. It's page 7,
12 paragraph 3.

13 A. Okay.

14 Q. And then focusing -- although again, if
15 you need, at any time I direct you to your report, 11:05:19
16 feel free to look and read any -- any part you
17 want.

18 I'm focusing on the second sentence of
19 paragraph 3:

20 "Digital IAP distribution services 11:05:32
21 include mechanisms used to make in-app purchases of
22 digital products, such as app upgrades, but does
23 not include mechanisms for the in-app purchase of
24 physical goods and services, such as buying
25 physical goods through the Amazon app or rides 11:05:46

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1 through the Uber app." 11:05:50

2 Do you see that?

3 A. Yes.

4 Q. Is Uber a member of the class?

5 A. I don't know whether they're a member of 11:05:59

6 the class. I think it would depend upon whether

7 they ever pay a commission, I guess, which I'm not

8 sure that they do. But I haven't investigated that

9 question.

10 Q. Okay. Well, if you assume Uber has not 11:06:18

11 ever paid a commission, in your view, is Uber not a

12 participant in the relevant market that you've

13 defined?

14 MR. LOPEZ: Object to the form.

15 THE DEPONENT: Well, Uber -- well, 11:06:46

16 they're not a member of the class, so -- but there

17 is -- there is free distribution for free apps. So

18 I guess they might participate in that form of a

19 distribution, but just not any paid distribution.

20 So they wouldn't be a class member. 11:07:04

21 Q. (By Mr. Swanson) Is free distribution a

22 part of the same relevant market that you've

23 defined?

24 A. You know, I -- I have to think about

25 that. That's a good question, but I -- I just 11:07:19

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1 haven't really thought about it. I'd have to think 11:07:28
2 about whether there's substitution for any
3 developers who do need to charge a price for
4 digital aspects of their apps. They can't really
5 turn to -- well, it's not just free distribution, 11:07:43
6 it's a -- they have to freely provide the apps
7 and -- and charge nothing for digital products
8 within the app. So I guess they would not be able
9 to substitute.

10 So I think that -- I think there would 11:07:55
11 probably be a separate market, but I'd have to
12 think about it more.

13 Q. So your inclination is that free
14 distribution would be a separate market that's not
15 relevant to this case? 11:08:06

16 MR. LOPEZ: Object to the form.

17 THE DEPONENT: I think probably, but I --
18 I haven't worked through that issue.

19 Q. (By Mr. Swanson) Is it your
20 understanding that a developer who currently is 11:08:19
21 utilizing only free distribution could not switch
22 to some form of paid or in-app purchase
23 distribution?

24 A. They -- they could. The problem is the
25 other way. They can't switch from paid to unpaid 11:08:40

1 if they -- if they need money. So the -- the 11:08:44
2 fact -- I mean, both of them are foreclosed
3 because, like I said, they couldn't -- I mean, they
4 could -- they could do both. The question is are
5 they really substitutes. And if you can't -- if 11:09:09
6 nobody wants to pay for your product, you can't
7 just go start charging for your product. But I'm
8 not quite sure that the switching -- I'm having a
9 hard time seeing the relevance to any issues here
10 about -- about the ability to escape the market 11:09:21
11 power or the exclusion.

12 Q. Well, let's take an example of a -- a
13 free app, a somewhat renowned one, in this case
14 Fortnite, which, at least before it was removed
15 from the App Store, was a free-to-download app. 11:09:45
16 You -- you're aware of that, right?

17 A. I have not investigated that.

18 Q. You're not aware of that then?

19 A. I -- I can't testify from personal
20 knowledge about that. I -- I -- my understanding 11:10:07
21 is they do charge for in-app purchases. Whether
22 they also charge for initial download or did, I --
23 I -- I wouldn't be surprised if the answer was no,
24 but I haven't -- I -- I can't testify about that
25 based on my own knowledge. 11:10:27

1 Q. Well, you're aware that there are many 11:10:29
2 apps that offer in-app purchase but that do not
3 charge for an initial download, correct?

4 A. Yes, obviously, yeah. And they're -- and
5 they're all part of this market, as I defined it. 11:10:41

6 Q. And you're also aware, are you not, that
7 many consumers download such apps but do not make
8 an in-app purchase?

9 A. Yes.

10 Q. So those apps with respect to those 11:10:59
11 consumers are completely free, correct?

12 MR. LOPEZ: Object to the form.

13 THE DEPONENT: Yes.

14 Q. (By Mr. Swanson) Are -- are those
15 transactions, those downloads for free and usage of 11:11:10
16 the app for free without ever making in-app
17 purchase, part of the relevant market you defined
18 in this case?

19 A. I don't know. As I said before, I'd have
20 to think more about the question about whether the 11:11:27
21 market could be further divided between those. I
22 don't think it would alter any of my conclusions
23 either way though.

24 Q. So it's your view that whether or not
25 those transactions are a part of your relevant 11:11:45

1 market is not pertinent to the opinion you've 11:11:49
2 reached in this case?

3 A. I don't think it would alter any of the
4 conclusions.

5 Q. And what percentage of transactions in 11:12:01
6 the Apple App Store are free?

7 Do you have an understanding?

8 A. I think most of them are, I believe.

9 Q. And you have not made any determination
10 before reaching the opinions in your report about 11:12:26
11 whether or not those transactions are in your
12 relevant market?

13 A. No, I think the conclusions would hold
14 either way about power and effects and exclusion.
15 So I didn't -- I didn't reach a conclusion about 11:12:41
16 whether you could separate them out or not,
17 especially since they are not in the class, so I
18 just didn't focus on that.

19 Q. So you haven't focused on it, but you
20 have a firm opinion that it doesn't make any 11:12:57
21 difference to your opinions that have been
22 expressed in your report?

23 A. As I sit here today, I -- I'm not seeing
24 how it would affect any of my opinions in this
25 case. 11:13:11

1 Q. Okay. 11:13:12

2 A. Or rather say it -- it might be -- change
3 the expression of them, just as the potential
4 subdivision of, you know, the initial app
5 distribution from the IAP distribution services, 11:13:25
6 but wouldn't change the ultimate conclusions on
7 anything.

8 Q. And -- and just to be clear, your
9 ultimate conclusions as you sit here today you
10 think would not change if free transactions were in 11:13:37
11 a separate market?

12 A. Correct.

13 MR. LOPEZ: Object to the form.

14 MR. SWANSON: Have we been going for
15 about an hour? 11:13:52

16 MR. LOPEZ: We have.

17 MR. SWANSON: Would we vote for a short
18 break?

19 MR. LOPEZ: I think that sounds good. Is
20 that good for you, Professor? 11:13:59

21 THE DEPONENT: Sure.

22 THE VIDEOGRAPHER: We're going off the
23 record at 11:14 a.m. This is end of media 1.

24 (Recess taken.)

25 THE VIDEOGRAPHER: We're on the record at 11:30:35

1 11:30 a.m. This is beginning of media 2 in the 11:30:36
2 deposition of Einer Elhauge.

3 Q. (By Mr. Swanson) All right. Professor,
4 you agree that the App Store is two-sided platform,
5 right? 11:30:54

6 A. Yes.

7 Q. And you agree that the relevant market at
8 issue here in this case is a two-sided market,
9 right?

10 A. Yes. 11:31:01

11 Q. And you also agree that the App Store is
12 a special kind of two-sided platform, namely a
13 two-sided transaction platform, right?

14 A. Yes.

15 Q. Do you agree that two-sided transaction 11:31:16
16 platforms exhibit strong indirect network effects?

17 A. Yes.

18 MR. LOPEZ: Objection.

19 THE DEPONENT: Sorry.

20 MR. SWANSON: Was that an objection or? 11:31:30

21 MR. LOPEZ: Yes, object to the form.

22 MR. SWANSON: Okay.

23 Q. (By Mr. Swanson) All right. You can
24 answer.

25 A. What was -- what's the question again? 11:31:38

1 Q. Oh. I'll try again. And then we'll deem 11:31:39
2 there to be an objection to form.

3 You agree, don't you, that two-sided
4 transaction platforms exhibit strong indirect
5 network effects? 11:31:53

6 A. Yes.

7 Q. And you agree that any relevant market in
8 this case must -- must be defined as a two-sided
9 transaction market, don't you?

10 MR. LOPEZ: Object to the form. 11:32:06

11 THE DEPONENT: No.

12 Q. (By Mr. Swanson) Well, is your relevant
13 market, the one that you've defined, a two-sided
14 transaction market?

15 A. Yes. I mean, that is the relevant market 11:32:23
16 for the core anticompetitive effects, but I don't
17 think any market relevant in the case has to be
18 one -- for example, there's markets for smartphones
19 and tablets that I discuss or perhaps even high-end
20 smartphones and tablets, and those are not 11:32:41
21 two-sided transaction markets.

22 Q. Are -- are those alleged as relevant
23 markets in the plaintiffs' complaint?

24 A. I don't know if they are. I -- I -- I
25 discuss them not as relevant to the anticompetitive 11:33:00

1 effects, but as relevant to arguments about tying 11:33:03
2 the time power to impose those exclusivity
3 restraints and to rebut arguments that the -- and
4 the anticompetitive effects in the relevant market
5 might be dissipated by competition in the 11:33:26
6 associated device markets.

7 Q. Do you understand -- sorry.

8 Do you understand there to be any claim
9 in this case of monopolization of a smartphone or a
10 tablet market? 11:33:48

11 A. No, I do not understand that to be a -- a
12 claim in this case.

13 Q. Do you understand there to be any claim
14 in this case of a restraint of trade of any
15 smartphone or tablet market? 11:33:57

16 MR. LOPEZ: Objection. Form.

17 THE DEPONENT: No.

18 Q. (By Mr. Swanson) In your opinion, is
19 the iOS operating system a two-sided platform?

20 A. The operating system itself, I don't 11:34:19
21 think is, and I think it is integral to the device
22 itself for the iPhone.

23 Q. Is the operating system integral to the
24 App Store?

25 A. No. 11:34:39

1 MR. LOPEZ: Objection. Form. 11:34:40

2 Q. (By Mr. Swanson) And why is it integral
3 to the device and not to the App Store?

4 MR. LOPEZ: Objection. Form.

5 THE DEPONENT: I mean, the -- the device 11:34:49

6 lacks any utility without the operating system and

7 every device that Apple sells has its iOS

8 operating system associated with it. So I think

9 for each one it's integral to that particular

10 device. But I would say smartphones and tablets 11:35:10

11 are different from each other, so that -- that's

12 really the product that's sold and the iOS is

13 just part of what the device needs to have -- or

14 whatever operating system the operating device

15 needs to have to be -- have any utility to 11:35:29

16 consumers.

17 Q. (By Mr. Swanson) Well, does the

18 App Store have any utility absent the iOS

19 operating system?

20 MS. MANIFOLD: Objection. 11:35:39

21 MR. LOPEZ: I'll join.

22 THE DEPONENT: Well, I think the app sort

23 of has separate utility because you -- you could

24 have a phone without an App Store or you could get

25 your stuff some other way. And certainly you can 11:35:52

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1 have -- you -- you could have iOS app 11:35:54
2 distribution without using the operating system.
3 So I think those are separate.
4 Q. (By Mr. Swanson) How -- how do you
5 distribute apps that are built out of the 11:36:11
6 components of the operating system without an
7 operating system?
8 MR. LOPEZ: Objection. Form.
9 THE DEPONENT: Well, I don't -- I don't
10 think the apps are built out of the components of 11:36:24
11 the operating system. The apps are separate code
12 that works with the operating system. But you
13 could, as -- as the case in other app distribution
14 markets, for example, download an iOS app -- apps
15 of the restraints. You could download an iOS 11:36:39
16 app, say, onto your computer and then transport it
17 over to your iOS device.
18 Q. (By Mr. Swanson) Is it your opinion that
19 the APIs that come with the license that the
20 developers obtained from Apple are not part of the 11:37:02
21 iOS operating system?
22 MR. LOPEZ: Objection.
23 THE DEPONENT: I would say that
24 they're -- they're something that Apple uses to
25 condition access to the iOS operating system. I 11:37:17

1 guess you need some way to condition the access, 11:37:25
2 but that it's really the conditioning on that, on
3 being exclusive on app distribution, that I'm
4 focusing on. So I think they -- they are using
5 their control over AIPs [sic] as part of their 11:37:43
6 operating system in order to prevent app developers
7 from being able to run on the operating system
8 without agreeing to app exclusivity.

9 Q. (By Mr. Swanson) Is it your view that
10 APIs are not part of the operating system? 11:38:02

11 A. I think -- I think that -- well, I think
12 that they are, but that's what's being conditioned
13 as part of the tie that I discuss in part 3, that
14 you're conditioning the ability to run on the
15 operating system using your control over the 11:38:26
16 operating system, including APIs, in order to
17 prevent developers from using the rival iOS app
18 distributors.

19 Q. APIs are Apple's intellectual property,
20 are they not? 11:38:42

21 A. I haven't been in an opinion that --
22 however, or looked into the issue about whether to
23 the extent too much be copied by intellectual
24 property or not. But I would not -- I -- I think
25 they -- they have control over it, whether it's 11:38:58

1 under intellectual property law or otherwise. 11:39:03

2 Q. Well, do any of your opinions rest on an
3 assumption or conclusion that APIs are not
4 protected by intellectual property owned by Apple?

5 A. No. 11:39:21

6 Q. Do you agree that failing to analyze the
7 App Store as a two-sided transaction platform would
8 lead to mistaken inferences of the kind that could
9 chill the conduct the antitrust laws are designed
10 to protect? 11:39:39

11 A. I don't know -- I don't know what --
12 whether in this particular case or have some
13 chilling effect, I don't know. I mean, I think the
14 correct way to analyze it is as a two-sided market
15 and that you might make mistakes if you do. You 11:39:57
16 know, I think the main mistake here of not doing
17 the two-sided market is actually not to chill
18 conduct, but the opposite, to allow anticompetitive
19 conduct by failing to consider the two-sided
20 effects. 11:40:16

21 Q. Do you agree that recognizing that the
22 App Store is a two-sided transaction platform is
23 critical to the proper economic analysis of the
24 plaintiffs' claims in this case?

25 MS. MANIFOLD: Objection. 11:40:29

1 MR. LOPEZ: Same. 11:40:33

2 THE DEPONENT: Could you say that whole
3 sentence again?

4 Q. (By Mr. Swanson) Sure.

5 Do you agree that recognizing that the 11:40:36
6 App Store is a two-sided transaction platform is
7 critical to the proper economic analysis of the
8 plaintiffs' claims in this case?

9 A. I think it is the -- the proper economic
10 analysis of plaintiffs' claims and it improves it. 11:40:52
11 I don't know that I would say it's critical that
12 you couldn't do an analysis without a two-sided
13 market approach, mainly because in this particular
14 market, it turns out that there are no charges
15 to -- you know, one-sided at the consumers. So 11:41:12
16 that although it's important for various, I would
17 say, more subsidiary points in the case, I -- I
18 think -- I -- I'm not sure I would say it really
19 was critical to be able to do analysis at all.

20 Q. And -- and it is your opinion that the 11:41:32
21 consumer side of this two-sided platform are not
22 charged the price by Apple, correct?

23 MR. LOPEZ: Objection.

24 THE DEPONENT: They are not charged a
25 price for distribution. Obviously, they're -- 11:41:51

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1 they're charged an app price, but they don't pay 11:41:52
2 for distribution services or no distribution fee
3 or -- or rebates or anything, so they're not in --
4 in that perspective, it's much cleaner, two-sided
5 market, and that the anticompetitive effect can be 11:42:10
6 seen from the commission level change itself.

7 Q. (By Mr. Swanson) And it is common in
8 two-sided markets and with two-sided platforms for
9 one side to receive the service or the product for
10 free, below cost? 11:42:30

11 A. It sometimes happens, yes, or sometimes
12 it's just a -- a lower price. There's all kinds of
13 variations in two-sided markets.

14 Q. And -- and in this case, Apple provides
15 the service to consumers for free, which is below 11:42:48
16 cost -- free is below cost, right?

17 A. Yes. I mean, I'm not sure what the
18 marginal cost would be, but like I said, it's
19 generally -- to consumers it's free, yes.

20 Q. I don't know if you still have 11:43:09
21 paragraph 3 open in front of you from your report.

22 A. I do.

23 Q. Okay.

24 A. Yes.

25 Q. I wanted to look toward the end of that 11:43:16

1 paragraph, which I think would be the second to 11:43:18
2 last sentence, the one that starts, "Key aspects."
3 "Key aspects of both iOS app and digital IAP
4 distribution services are transactional in nature."

5 Do you see that? 11:43:38

6 A. Yes.

7 Q. What key aspects are you referring to?

8 A. Well, it's a simultaneous transaction on
9 which, you know, for each download of the app or
10 distribution of the in-app purchase, we're handling 11:43:50

11 a monetary payment and Apple is distributing the
12 product from the developer to the consumer and --
13 you know, and -- and the more -- the more

14 developers you have, the more valuable that is to
15 consumers to have that distribution. And, 11:44:14

16 likewise, more consumers will come to a distributor
17 the more valuable that is to the app developers.

18 Q. Is there a reason you refer to a market
19 for iOS app distribution rather than a market
20 for iOS digital app transactions? 11:44:30

21 A. I -- I refer to a market for both of
22 them. Sometimes, just to be as a shorthand, as I
23 say, I just call it iOS app distribution just
24 because linguistically it just comes -- trips
25 easier off the tongue to talk about iOS app 11:44:53

1 distributors. But there's no particular reason why 11:44:56
2 the shorthand is that. It's just about most
3 convenient shorthand for the combination of iOS
4 app distribution and digital IAP mechanisms.

5 Q. Well, is it then your testimony that 11:45:08
6 market for iOS app distribution is synonymous
7 with market for iOS digital app transactions?

8 MS. MANIFOLD: Objection.

9 THE DEPONENT: The -- the market
10 definition I use encompasses both. I wouldn't say 11:45:20
11 that they are necessarily synonymous. You could
12 separate them out. And when it -- when it becomes
13 relevant, I do talk about them separately. I just
14 note in this paragraph that sometimes for brevity,
15 I just call it, you know, iOS -- iOS app 11:45:37
16 distribution and iOS app distributors.

17 Q. (By Mr. Swanson) Well, what is the
18 relevant product here? Is it digital transactions
19 or is it some type of distribution service if
20 they're different? 11:45:52

21 A. Well, this market for iOS app
22 distribution and the digital IAP mechanisms.

23 Q. So you don't agree that the relevant
24 product is digital transactions?

25 MS. MANIFOLD: Objection. 11:46:07

1 THE DEPONENT: I mean, I guess they 11:46:15
2 are -- I suppose they are all digital transactions.
3 But digital transactions could encompass other
4 things as well, right, so I don't know if I go --
5 you know, if I send somebody some money on Venmo, I 11:46:35
6 guess that's a digital transaction, but that's not
7 part of the relevant market. And if you're
8 distributing an Android app, that's a digital
9 transaction, but that's not part of the market. So
10 I think my definition is more precise. 11:46:48

11 Q. (By Mr. Swanson) It's your understanding
12 that there are digital transactions in this -- in
13 an iOS app that are not subject to a commission
14 if they have a positive price?

15 A. Well, I mean, a digital transaction, like 11:47:03
16 if -- if you take an Uber ride, I guess there's a
17 transaction that is mediated through digital
18 mechanism. But Uber doesn't pay for that because
19 it's not a digital product. So when I talk -- like
20 when I'm talking about a digital IAP mechanism, I'm 11:47:22
21 careful to say it means the in-app purchase of a
22 digital product, not just any digital transaction.

23 Q. Well, is it your view that Uber and
24 Amazon product purchases and other such
25 transactions are not physical transactions? 11:47:44

A. The product is physical. There is a transaction that's digital and that -- you know, you -- you click on something and the -- the money goes out through -- through a digital mechanism.

So we're -- we're -- we're certainly -- that's why I'm careful to define the differences, not just a digital payment mechanism, but it's for in-app purchases of digital products. Otherwise, they're -- wouldn't be in a relevant market and are not covered by the exclusivity restraints.

11 Q. So your opinion is that an Uber ride
12 transaction is a digital transaction that Apple has
13 not imposed a commission on?

14 A. I mean, you -- you could describe it as a
15 digital transaction. That's not the way -- but I'm 11:48:35
16 careful to say it the first time, but I -- you
17 know, I don't repeat it every time. So I do just
18 talk about digital IAP mechanisms. But that's not
19 the kind of in-app purchase that is within the
20 relevant market as I discuss it. 11:48:51

21 Q. So again, coming back to what the product
22 is in your relevant market, some digital
23 transactions are the product in a relevant market
24 and some digital transactions are not a product in
25 your relevant market? Is that the case? 11:49:11

1 MR. LOPEZ: Objection. Form. 11:49:13

2 THE DEPONENT: Perhaps you can clarify.

3 Are you using the words -- phrase "digital

4 transactions" to include digital payment mechanisms

5 for physical products? 11:49:21

6 Q. (By Mr. Swanson) I'm using it in an

7 economic sense. Is that -- does that term not have

8 any --

9 A. I -- I think it's ambiguous, so -- I

10 mean, if you -- if you're reading it to include any 11:49:36

11 digital payment mechanism, whether or not the

12 product is physical, the answer would be one way.

13 But if you're reading it to include only mechanisms

14 to pay for digital products, then the answer would

15 be another answer. So I -- I don't think 11:49:56

16 economics -- abstract economics tells you how you

17 are defining the phrase in your question. So if

18 you could clarify, then I could give you a more

19 helpful answer I think.

20 Q. Well, sir, you tell me. What -- what are 11:50:12

21 the -- what are the attributes of the product in

22 your relevant market? How do I identify when a

23 transaction is a product in your relevant market?

24 A. It is -- either the download, initial

25 installation of an iOS app, or it is an in-app 11:50:30

1 purchase of digital products within an iOS app. 11:50:36

2 Q. And you are excluding in your view, an
3 Uber transaction is not an in-app purchase of a
4 digital product?

5 A. Right. 11:50:55

6 Q. And that is because what?

7 A. It's a physical product or physical
8 service.

9 Q. Okay. And -- and is that because the
10 payment takes place outside of the app? 11:51:07

11 A. No, it's not because a payment occurs
12 outside the app. It's just because it's not a --
13 digital products. We're not -- we're not -- the
14 distributions are not of something digital.

15 There's just a payment that occurs. And that's -- 11:51:25
16 the payment might be mediated by digitality, but
17 the actual distribution is not being done by Apple
18 of the physical good if it's Amazon or not being
19 done -- or the ride, which is being done by Uber.

20 Q. Are there multiple products in your 11:51:51
21 relevant market?

22 A. No, it's just one product, the market for
23 these sorts of transactions.

24 Q. And in your opinion, all of these sorts
25 of transactions are reasonably interchangeable? 11:52:06

1 A. Well, I would say the -- either -- I 11:52:12

2 think all the -- the distribution -- initial

3 distribution are all reasonably interchangeable.

4 The in-app purchases are all reasonably

5 interchangeable. Whether they are inherently part 11:52:24

6 of a single product is something I don't opine on.

7 But there is not a question of interchangeability

8 so much as whether or not, as a matter of

9 economics, it's efficient to combine them together

10 in order to monetize the benefits of app 11:52:40

11 distribution.

12 Q. Is -- is a zero-priced download of an app
13 from the App Store a product in your relevant
14 market?

15	A. I guess this goes back to what we talked	11:53:09
16	about before. And I think a free app -- I mean, it	
17	does involve distribution, but there's no charge	
18	for it. So I think it would be different,	
19	actually, I think, fall within the -- the price	
20	discrimination market distinction. It would be	11:53:30
21	outside the market because they're charging a	
22	commission to pay for paid apps and paid IAPs, but	
23	nothing for the free ones and it fits the part of	
24	my report that emphasizes that for targeted price	
25	discrimination markets, you also have to show that	11:53:50

1 the anticompetitive effect is felt by some set of 11:53:52
2 customers but not the other. So I'd say the -- the
3 ones who are not being charged any commission are
4 not being affected by the inflation in commission.
5 So I would say it's a -- it's a separate market 11:54:03
6 under the price description market concept.
7 Q. So -- so now that you've thought about
8 it, your conclusion is that zero-priced
9 transactions are not in your relevant market?
10 A. I think so, yes. 11:54:22
11 Q. Are subscription transactions in the
12 relevant market that you define?
13 A. Yes.
14 Q. If a subscription is effectuated outside
15 the app subsequent to the app download, is that 11:54:40
16 transaction in your relevant market?
17 A. So I guess it depends on whether it's an
18 in-app purchase or not. So there might be ways for
19 some subscriptions to get them outside the app. In
20 that case, it would be an out-of-app purchase and 11:55:15
21 thus not within the relevant market.
22 Q. If a developer has only one app that is
23 free to download and that only has an out-of-app
24 subscription option, is that developer a member of
25 the class? 11:55:34

1 A. No, I don't think so, because they 11:55:37
2 wouldn't pay any commission to Apple.

3 Q. Do you agree that only other two-sided
4 platforms can compete with a two-sided platform for
5 transactions? 11:55:57

6 MS. MANIFOLD: Objection.

7 THE DEPONENT: I don't know if that's
8 uniformly true across all conceivable two-sided
9 markets, but I think it was true in this case.

10 Q. (By Mr. Swanson) Do you agree with the 11:56:19
11 view that Apple is a retailer that sells iOS apps
12 and in-app content and app developers are suppliers
13 that manufacture apps and in-app content and supply
14 them through Apple?

15 MR. LOPEZ: Objection. Form. 11:56:34

16 THE DEPONENT: I'm sorry. Could you say
17 that whole thing again.

18 Q. (By Mr. Swanson) Do you agree with the
19 view that Apple is a retailer that sells iOS apps
20 and in-app content and app developers are suppliers 11:56:44
21 that manufacture apps and in-app content and supply
22 them through Apple?

23 A. No.

24 MR. LOPEZ: Same objection.

25 THE DEPONENT: As I say, I think I cover 11:56:55

1 in my report I -- I distinguish them from 11:56:57
2 retailers. They're -- they're instead selling
3 transactions, so -- so on that I agree with Apple's
4 expert Professor Schmalensee.

5 Q. (By Mr. Swanson) Are you aware that 11:57:10
6 Professor McFadden has opined that the App Store is
7 a retailer and that app developers are wholesale
8 suppliers?

9 MS. MANIFOLD: Objection.

10 THE DEPONENT: I'm unaware of that. 11:57:19

11 Q. (By Mr. Swanson) Okay. If Professor
12 McFadden holds that view, do you disagree with him?

13 MS. MANIFOLD: Objection.

14 THE DEPONENT: I do. I think it's a
15 market for transactions. What they're selling is 11:57:29
16 these distribution services. It's not like they're
17 taking possession and then reselling the product at
18 some later point in time the way a retailer would.
19 So at least to the extent -- if -- if the use of
20 the word "retailer" is trying to make them suggest 11:57:47
21 that the economics are the same as they are for
22 ordinary brick to mortar retailers, then I would
23 disagree.

24 Q. (By Mr. Swanson) Professor, are you
25 offering any opinions about the existence of 11:58:03

1 relevant submarkets within your iOS app 11:58:07

2 distribution market?

3 A. I do -- well, I don't opine whether

4 there's a submarket for iOS app distribution

5 versus in-app purchases. I do opine that there is 11:58:21

6 not a separate distribution market for games versus

7 nongames, and I -- I didn't see any other good

8 evidence for submarkets within the app distribution

9 market or IAP market.

10 Q. Is it your opinion that the iOS app 11:58:49

11 distribution market is a submarket of some broader

12 market?

13 A. No.

14 Q. So do you plan to offer any opinions

15 about the existence of relevant submarkets? 11:59:05

16 A. Yes. What I just said.

17 Q. I -- I did -- fair enough.

18 Do you plan to offer any opinions that

19 that there are relevant submarkets in this case?

20 A. Oh, I -- I -- I don't plan to offer an 11:59:24

21 opinion there's any relevant submarket to the IAP

22 distribution and IAP mechanisms market. If there

23 was an argument that there's a broader market for

24 all app distribution, I would say that you could

25 break that down into the iOS app distribution 11:59:51

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1 versus other app distribution. 11:59:54

2 So I do -- I do get into the issue of
3 whether or not in a broader market there would be
4 market power and one -- and I talk about how I
5 think even in that broader market there would be 12:00:05
6 market power. But if you took that view, then my
7 conclusion about a relevant market would be a
8 submarket of that broader, I think too broadly
9 defined, submarket.

10 Q. How do you measure price in a two-sided 12:00:19
11 transaction market?

12 MS. MANIFOLD: Objection.

13 THE DEPONENT: Well, it's the price --
14 combination of price to both sides. And in this
15 case, it's just clean because only one side is 12:00:28
16 actually being charged. So here, it turns out to
17 just be the commission being charged to the
18 developers.

19 Q. (By Mr. Swanson) Does a measure of price
20 charged by a two-sided transaction platform need to 12:00:44
21 account for benefits that a platform provides to
22 one or both sides?

23 A. Yes.

24 Q. If a platform charges one side a positive
25 price and provides a subsidized benefit to the 12:01:01

1 other side, how would you calculate the two-sided 12:01:04
2 price?

3 A. Well, the question is what the difference
4 is from the conduct is what I would say. And so as
5 I go through in the last part of my report, there's 12:01:15
6 no benefit from this exclusionary conduct for the
7 consumers. So whatever you think the baseline
8 benefit might be, the point is -- is they're only
9 harmed by the difference. So the combined effect
10 is even worse than the effect on the commission. 12:01:33

11 Q. You talk about the impact on consumers.
12 Does Apple charge consumers a price? I thought --

13 MS. MANIFOLD: Objection.

14 Q. (By Mr. Swanson) -- we heard -- you told
15 us that Apple did not charge consumers anything. 12:01:48

16 A. They don't charge consumer --

17 MS. MANIFOLD: Objection.

18 Sorry.

19 THE DEPONENT: Sorry, I -- I shouldn't
20 rush my answer before any -- somebody want to make 12:01:57
21 an objection or something?

22 MS. MANIFOLD: I made the objection. My
23 apologies for interrupting -- interrupting both
24 gentlemen.

25 Thank you. Objection made. 12:02:04

1 MR. SWANSON: No problem. 12:02:06

2 THE DEPONENT: Could you say that
3 question again.

4 Q. (By Mr. Swanson) Let me see. Do you
5 agree that Apple does not charge consumers 12:02:17
6 anything?

7 A. Yes.

8 Q. Okay. Is it your opinion that in the
9 but-for world, Apple would pay some type of rebate
10 to consumers? 12:02:33

11 A. No.

12 Sorry. I'm rushing my answers again.

13 Q. And -- and is -- is there a -- a price to
14 consumers in the but-for world that would be lower
15 than zero? 12:02:49

16 MS. MANIFOLD: Objection.

17 THE DEPONENT: No, they would just
18 benefit in non- -- nonprice ways.

19 Q. (By Mr. Swanson) So in your opinion, are
20 consumers indirectly affected by the price in the 12:03:04
21 two-sided transaction market?

22 MR. LOPEZ: Objection.

23 THE DEPONENT: I don't know if I would
24 call it indirect because it seems like part of the
25 whole notion of two-sided market is to say that 12:03:20

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1 it's all -- they all count as part of it. So I -- 12:03:23
2 I -- I think the -- I -- I would disagree with the
3 indirect characterization.

4 Q. (By Mr. Swanson) Well, is there anything
5 in the but-for world that Apple would do 12:03:34
6 differently with consumers in terms of direct
7 charge?

8 MR. LOPEZ: Objection.

9 THE DEPONENT: No, not in terms of direct
10 charge, but as I discuss, the effects would be 12:03:46
11 different on the quantity and quality of apps and
12 the freedom to choose distributors for consumers.

13 Q. (By Mr. Swanson) In economic analysis of
14 two-sided markets, what are the economic
15 characteristics of the side of the platform that 12:04:10
16 gets the lower or zero price?

17 MS. MANIFOLD: Objection.

18 THE DEPONENT: What -- I'm sorry. Can
19 you say that again, that question.

20 Q. (By Mr. Swanson) Yes. In economic 12:04:22
21 analysis of two-sided markets, what are the
22 economic characteristics of the side of the
23 platform that gets the lower or the zero price?

24 A. I guess it would depend on the particular
25 market what their economic characteristics are. 12:04:40

1 Q. In -- in terms of relative elasticity of 12:04:44
2 demand, is there any -- anything that economic
3 theory teaches about who gets the lower or zero
4 price?

5 A. So I -- I don't know if we can draw any 12:05:06
6 general conclusions or -- I mean, it wouldn't be an
7 elasticity measure relative to price changes if
8 they're not paying any price, but there might be
9 elasticity of demand relative to quality or
10 something like that in -- in the market. But if -- 12:05:21
11 if you're not paying anything, then it's not a -- a
12 price-driven or price-responsive elasticity.

13 Q. Why -- why would Apple charge consumers
14 nothing and developers a commission in their
15 economics? 12:05:40

16 A. Oh. Well, you know, it's not just Apple.
17 It's all the other major app distributors as well.
18 So, you know, it -- it must be that it's -- I infer
19 from that pattern that it's just a more efficient
20 way to run the market, most likely reason being 12:06:01
21 that you want to collect as many consumers as
22 possible in order to make the market attractive to
23 distributors, and that as an empirical matter, that
24 if you charge consumers, you would drive too many
25 to participate in -- in the distribution market, 12:06:16

1 they would, you know, be less likely to participate 12:06:19
2 and less likely to try things out.

3 So I think, you know, one could have
4 imagined the different world, but I guess given the
5 actual tendency of -- of -- of how consumers 12:06:37
6 were -- would likely respond, it seems like the
7 businesses have concluded that this is the most
8 efficient way to price in this two-sided market.

9 Q. Is the relevant two-sided price in this
10 case the commission rate or the actual dollar 12:06:58
11 commission payment in a particular transaction?

12 A. I -- I would say it's the -- well, the
13 commission rate, I mean, obviously it -- it results
14 in a dollar amount. But Apple has always charged a
15 percentage rather than a -- a fixed fee, as do I 12:07:19
16 think all the large app distributors.

17 Q. Could you turn to page 96 of your report,
18 paragraph 186.

19 A. Okay.

20 Q. You state here that -- in paragraph 186 12:07:53
21 that irrelevant market is not a single-brand market
22 because you've defined the market to be neutral as
23 to who is actually providing the iOS app and
24 digital IAP distribution services.

25 Do you see that? 12:08:12

1 A. Yes. 12:08:13

2 Q. What do you mean by defining the market
3 to be neutral?

4 A. I mean that I haven't defined it to be
5 the Apple provision of iOS app and digital IAP 12:08:22

6 distribution services. So it's not a -- it's not
7 being defined as a single brand operating within
8 a -- a market. So it's not a brand-specific

9 definition. In the but-for world, there will be
10 all kinds of other providers. And even in the 12:08:40

11 actual world, there's a few fringe providers in the
12 market who are not Apple, so it's not a
13 single-brand market.

14 Q. Can you redefine a single-brand market in
15 a neutral way that you describe if the brand's 12:08:57

16 product is protected by intellectual property
17 rights?

18 A. I don't think -- think that intellectual
19 property rights extend to exclusivity on app
20 distribution. 12:09:10

21 Q. Well, don't intellectual property rights
22 extend to whether or not someone else can compete
23 and offer the same product if they don't have those
24 rights?

25 A. Well, I mean, every exclusivity restraint 12:09:24

1 uses a property right to impose some exclusivity 12:09:28
2 condition. That doesn't mean that you have -- that
3 the property right gives you the antitrust right to
4 impose such exclusivity. So if I'm -- I'm selling
5 some garden variety product but this guy has got 12:09:44
6 monopoly power and he said I'm not going to sell it
7 to you, Mr. Distributor, unless you give me
8 exclusivity, that's true that he has property
9 rights. But that's still an exclusivity restraint.

10 Likewise here, I think even though they 12:10:02
11 have intellectual property over the operating
12 system, conditioning access to the operating system
13 on agreeing to exclusivity on app distribution is
14 the -- the relevant concern.

15 Q. Well, if the company makes a garden 12:10:17
16 variety product, another company can make an
17 identical product, can they not, without violating
18 any law?

19 MR. LOPEZ: Object to the form.

20 THE DEPONENT: Well, they may or may not 12:10:33
21 be able to, depending on the market circumstances.
22 They're not prevented to by property law, but there
23 may be practical reasons they can't make the same
24 product. Maybe the first firm has the only access
25 to supplies that could do it or the only -- even 12:10:47

1 without intellectual property rights, maybe they 12:10:52
2 have the only know-how or maybe they just, you
3 know, have the only plant that's actually been made
4 that can do it.

5 So there's all kinds of sources of 12:11:00
6 monopoly power, other than intellectual property
7 rights, you know, and I think -- but -- but at some
8 point there's a -- there's underlying property
9 right that would have to prevent the rival in the
10 sense that the rival can't sort of invade the plant 12:11:18
11 of the first firm and say, "Well, you're
12 monopolist, but not once I start taking over your
13 plant and inserting my people in your assembly
14 line." So in that sense, I guess property rights
15 could prevent or -- or -- or helping to prevent 12:11:32
16 the -- the monopolization from being undone. But,
17 aside -- there -- assuming that we -- that that
18 kind of property right protection is allowed, I
19 think it is the case that sometimes rivals can't
20 make the same garden variety product. 12:11:51

21 Q. (By Mr. Swanson) Well, intellectual
22 property -- intellectual property rights are
23 allowed, are they not?

24 A. Yes, they are allowed, but that doesn't
25 alter the ability to condition them on exclusivity 12:12:03

1 restraints. 12:12:06

2 Q. Well, if a product is protected from
3 copying intellectual property rights, then another
4 company cannot make or distribute that property --
5 that product, can they? 12:12:22

6 A. Right. But that's different from being
7 able to condition it on exclusivity on something
8 else.

9 Q. So if a single brand involves a product
10 protected by intellectual property rights, can it 12:12:38
11 be redefined in the neutral way? Can a market for
12 that single brand be redefined in the neutral way
13 that you described?

14 A. I'm not understanding the premise here.
15 The whole point is there's not a single brand. 12:12:53
16 It's -- multiple brands could produce iOS app
17 distribution services and -- and -- and -- and do,
18 in fact.

19 Q. And to produce iOS distribution
20 services, would another company need to use the 12:13:10
21 word "Apple"?

22 A. I don't know if they -- I mean, the -- I
23 don't think -- I don't think they need a
24 requirement. I guess in terms of marketing your
25 product, you might want to identify, you know, the 12:13:33

1 devices on which it could run. But that's the -- 12:13:36
2 you know, Apple does have a device market, is in a
3 device market, but I am not defining a market for
4 Apple smartphones, for example. That's -- that's
5 not a relevant market and that would be the one 12:13:51
6 covered, I think, by that sort of intellectual
7 property issue.

8 Q. Could a rival iOS distributor use the
9 term "iOS"?

10 A. I -- I think so, again, in terms of 12:14:08
11 defining well, this is -- this is an app that could
12 run on these kinds of devices, you know. So I
13 don't think there's any prohibition against using
14 that terminology.

15 Q. Is it your opinion that a rival iOS 12:14:19
16 distributor could use any of Apple's iOS code?

17 A. Well, I think they'd have to get access
18 to the IA -- the A -- APIs in order to run on the
19 operating system. And as -- as I say in the
20 report, I -- I'm -- exclusivity restraint is not 12:14:47
21 that Apple is picking which apps that they allow to
22 run. The problem is conditioning that on
23 exclusivity in app distribution.

24 Q. So is it your opinion that a rival iOS
25 distributor would need to use some of Apple's iOS 12:15:08

1 code? 12:15:13

2 A. I -- I -- I don't know -- have enough
3 technical know-how to know whether exactly --
4 what -- what exactly the code is, whether it's part
5 of the OS code, whatever they need. But just as a 12:15:25
6 practical matter from what I read in this case,
7 there are technical ways that Apple can prevent an
8 app from running on its operating system unless
9 they agree to exclusivity and that they do exercise
10 those methods. 12:15:44

11 Q. Well, are you assuming that Apple has no
12 right under intellectual property to prevent a
13 rival iOS app distributor from using its code?

14 A. I think they can condition it. There's a
15 difference between what is called a unilateral 12:16:01
16 refusal to deal and giving something on a condition
17 of exclusivity. So that's always been a big
18 important distinction in the economics of these
19 exclusivity restraints. Here, we have the latter.
20 So, I mean, there's not -- none of the -- my 12:16:19
21 analysis is objecting to Apple saying for this app
22 or it's not going to allow it to run on our
23 operating system because we think it's a bad app
24 for some reason. The problem is saying to
25 condition that, you can only run on our system if 12:16:31

1 you have -- give us exclusivity over the 12:16:34
2 distribution of your app.

3 Q. Well, setting aside any contractual
4 conditions, if a company uses Apple's code to
5 distribute iOS apps, does that company use or 12:16:56
6 practice Apple's intellectual property?

7 MR. LOPEZ: Objection.

8 THE DEPONENT: I -- if -- if they -- I --
9 I -- I don't know enough about the -- the technical
10 details, but it would not alter any of my 12:17:12
11 conclusions one way or the other.

12 Q. (By Mr. Swanson) Your -- your
13 conclusions would hold if Apple has a right under
14 the intellectual property laws to exclude rival app
15 distributors? 12:17:30

16 A. Not whether intellectual property rights
17 exclude rival app distributors. It can exclude
18 apps, but not on the basis of rivalry, it seems to
19 me.

20 Q. Well, intellectual property laws don't 12:17:44
21 ask how or why a -- an infringer is using someone's
22 protected intellectual property, do they?

23 A. I mean, to me, this -- you're asking a
24 legal question, so -- so is it okay if I refer to
25 law then? 12:18:10

1 Q. Well, I -- what -- what I'm really trying 12:18:14
2 to ask is what are your assumptions?

3 A. I'm doing an economic analysis of the
4 effects of the condition. So you're asking whether
5 intellectual property right gives you the right to 12:18:26
6 perform and do these various antitrust violations.
7 I am not going to opine about law, but to answer
8 your question, I would say it seems to me this is
9 the very point that was rejected in the Microsoft
10 decision, where the court specifically said it was 12:18:39
11 a ridiculous argument basically to say that because
12 you have intellectual property rights, you had
13 conditioned them on any, you know, exclusive
14 restraint you want. But I think the analogy they
15 drew was just because you own a baseball bat 12:18:51
16 doesn't mean you can hit people with it.

17 So there is -- I think there's a very
18 well-known distinction in law as well, but I would
19 just say as an economic matter in this case, it's
20 very different to say I'm just going to exercise my 12:19:05
21 rights to exclude, whatever my property rights to
22 exclude are in a nondiscriminatory, unconditioned
23 way versus exercising in a way that discriminates
24 against rivals or that conditions access to
25 exclusivity on something else, which is what's 12:19:28

1 going on here. 12:19:31

2 Q. Well, has Apple ever licensed any company
3 to distribute iOS apps in competition with Apple?

4 A. Well, it -- it shouldn't have to license
5 that. It needs -- it provides licenses for the 12:19:46
6 apps to run on their app system. The trouble is
7 they're conditioning that on exclusivity on app
8 distribution.

9 Q. Are you saying that it's a conditional
10 refusal to deal? 12:20:02

11 A. Well, all -- all exclusive dealing are
12 conditional refusals to deal. It's dealing only on
13 a condition of exclusivity.

14 Q. Well, is there any instance where Apple
15 has had a preexisting relationship with a company 12:20:18
16 where Apple allowed that company to distribute iOS
17 apps to third parties for payment on the App Store?

18 A. No. The -- the whole preexisting
19 relationship doctrine is about unconditioned
20 refusals to deal. It's not about agreements to 12:20:40
21 deal conditioned on exclusivity. That's why it's a
22 whole different doctrine.

23 Q. Well, is it your opinion that any company
24 could distribute iOS apps without a license from
25 Apple? 12:20:58

1 MR. LOPEZ: Object to this entire line as 12:20:59
2 calling for improper legal conclusions.

3 THE DEPONENT: I think in the but-for
4 world they could, without the restraints.

5 Q. (By Mr. Swanson) So in your but-for 12:21:08
6 world, app -- App Market X distributes apps on
7 Apple's iOS devices and that distributor needs no
8 intellectual property license from Apple whatsoever
9 to do that?

10 MR. LOPEZ: Same objection. 12:21:34

11 Q. (By Mr. Swanson) Is that the assumption
12 you're making in your but-for world?

13 A. Well, I -- I -- your -- your question
14 assumed more than my but-for world. So you're --
15 the -- I -- I am not assuming that the app 12:21:44
16 distribution would have to occur on the device
17 itself. The app distribution could occur outside
18 the device and then people could copy over the app.
19 But within the app, yes, that they -- they could
20 not condition -- to the extent you need an app in 12:22:01
21 order to -- on the device to do the distribution,
22 Apple wouldn't be able to exclude rival app
23 distributors based upon the fact that they're
24 competing with them. That would be the very tying
25 restraint that I detail. 12:22:20

1 Q. Well, are you saying that in the but-for 12:22:23
2 world, Apple is compelled to license competing app
3 distributors?

4 A. It would not be able to condition access
5 based upon the fact that they're rivals. I don't 12:22:38
6 think they would have necessarily the duty to
7 license all of them. So, for example, if there was
8 some app distributor who was clearly distributing
9 malware, it could just -- you know, neutrally
10 applying principles under the app review, it could 12:22:55
11 maintain the integrity of its devices by excluding
12 them. But what it couldn't do is impose an
13 exclusivity condition by using that power to
14 exclude anybody who competed with it in the app
15 distribution market. 12:23:16

16 Q. In your but-for world --

17 MR. LOPEZ: Again, same -- again, same
18 objection to this entire line. It calls for
19 improper legal conclusions.

20 Q. (By Mr. Swanson) In -- in your but-for 12:23:23
21 world, there are no exclusivity restraints,
22 correct?

23 A. None of the ones that I identify as
24 problematic.

25 Q. Okay. So in your but-for world, is there 12:23:35

1 a compulsory intellectual property license that 12:23:39
2 Apple gives to rival iOS app stores?

3 A. No. It's not -- not a compulsory
4 license. It's just an obligation not to impose
5 exclusivity restraint as a condition of access. 12:23:55

6 Q. Well, is that a -- is that, in your
7 but-for world, a condition that Apple not exercise
8 its intellectual property rights?

9 A. No. It's just the standard doctrine that
10 you -- the fact that you have property rights 12:24:09
11 doesn't entitle you to attach anticompetitive
12 exclusionary conditions to them.

13 Q. Well, is charging a payment for use of
14 intellectual property exclusionary?

15 MR. LOPEZ: Same objection. 12:24:30

16 THE DEPONENT: Generally, no. I guess I
17 could imagine cases where charging a certain price
18 might be exclusionary, but -- or if you manipulate
19 the price in a way to achieve effectively an
20 exclusivity condition, it could be exclusionary. 12:24:51
21 But the mere -- if you have some standard fixed
22 price for a product that's above cost, normally
23 that's not anticompetitive.

24 Q. (By Mr. Swanson) And are there any
25 licenses from Apple to competing app stores in your 12:25:05

1 but-for world? 12:25:11

2 A. To the extent they need to license them,
3 yes, in order for them to be able to compete. It's
4 not clear to me whether that's a necessary
5 technological feature or whether these licenses are 12:25:28
6 just something that Apple has used to impose these
7 exclusivity conditions.

8 Q. Well, my question is what do you assume
9 in the but-for world? Do you assume there are
10 licenses from Apple of its intellectual property to 12:25:43
11 competing iOS app distributors?

12 A. I think there would be, 'cause it --
13 it -- it could not say that -- you couldn't just
14 exclude them all just because they're an app --
15 rival app distributors. That doesn't mean you have 12:26:02
16 to license everybody. There could be, you know,
17 reasons on the merits why some should not be
18 licensed and some should. And I think it could
19 neutrally apply those principles, as I indicate in
20 my procompetitive justification section. 12:26:18

21 Q. Is it your opinion that the licenses
22 Apple would provide in the but-for world would be
23 free licenses?

24 A. I think they would be nondiscriminatory.
25 Whether they have to be free or not, I don't know. 12:26:36

1 You know, right now it has -- has some fees for the 12:26:41
2 app distribution and to have app access, so I guess
3 it could -- it could charge that in a neutral way
4 as long as it's not manipulating it to impose
5 effective exclusivity conditions. 12:27:02

6 Q. And an effective exclusivity condition
7 would be one which prevented a rival app store from
8 participating in the marketplace?

9 A. Not just any old rival app store, but if
10 it prevented a group of them. So, for example, I 12:27:19
11 think Apple charges \$99 a year to app developers.
12 If it just charged the same \$99 to a -- a developer
13 that developed an -- its own app store app, that, I
14 think, is fine. If some rival app store couldn't
15 pay the \$99, that wouldn't be exclusionary. It's 12:27:43
16 the same price. But if Apple were to say, Well, we
17 charge \$99 to developer unless you're a developer
18 of an app that offers rival app distribution, then
19 we charge them \$10 million each. That would be
20 manipulating the price to effectively impose an 12:27:59
21 exclusivity condition.

22 Q. Well, if a rival app store on iOS were
23 able to earn a billion dollars in profit, would you
24 find it to be exclusionary if Apple required a
25 \$10 million royalty payment? 12:28:19

1 MR. LOPEZ: Objection. 12:28:22

2 THE DEPONENT: I think -- unless it was
3 based upon some neutral principle. I mean, if it's
4 doing it only to rival app distributors, I think
5 that would be exclusionary. On the other hand, 12:28:34
6 if -- because that would be really just a condition
7 that's punishing rivalry. If Apple changed its
8 whole system and said well, we're actually going to
9 charge every app a percentage of the revenue that
10 they make from our -- in general, I -- I guess they 12:28:52
11 could do that. But that doesn't seem at all
12 likely, given the consistent method of pricing that
13 they've used.

14 Q. (By Mr. Swanson) Well, is it your
15 assumption that everything will stay the same in 12:29:11
16 the but-for world except for the royalty rate?

17 MR. LOPEZ: Objection. Form.

18 THE DEPONENT: No.

19 Q. (By Mr. Swanson) Have you identified any
20 aspects of license compensation that would be 12:29:35
21 different in the but-for world in your report?

22 A. For -- for license compensation, just the
23 commission difference.

24 Q. How about payment for the license?

25 A. That's -- that's the commission that they 12:30:05

1 charge. 12:30:07

2 Q. Right. And then there's an annual fee
3 for developers you mentioned of \$99?

4 A. Yeah. I haven't made any assumption
5 about that changing. 12:30:15

6 Q. You note in your report that there is a
7 enterprise developer program where Apple charges
8 \$299 annually for a license. You aware of that?

9 A. Let me see.

10 Yes. 12:30:40

11 Q. And that higher charge, \$299, is for a
12 license to use Apple's intellectual property in a
13 way that generates no commission revenue for Apple,
14 correct?

15 A. Well, no, not immediately. 12:30:57

16 Q. And do you have an understanding as to
17 why that fee is higher than the fee for the
18 Developer Program License Agreement?

19 A. I'm not sure why the fee is different.
20 Perhaps because it's -- it seems like it's 12:31:31
21 resulting in an app that goes to multiple
22 employees.

23 Q. And is there -- are you making any
24 assumption in your but-for world, for example, that
25 Apple would not raise its license fee to a higher 12:31:48

1 amount like \$299? 12:31:55

2 A. I -- I haven't made any assumption that
3 they would alter the developer -- the annual fee to
4 developers.

5 Q. How about for developers who only would 12:32:14
6 use a nonApple app store to distribute? Would
7 Apple keep the fee the same at \$99, or is it
8 possible Apple could raise that fee?

9 MR. LOPEZ: Objection.

10 THE DEPONENT: I think -- I think if they 12:32:38
11 charged an additional fee just because they're
12 using a rival, then that would be effectively, you
13 know, charging a penalty to try to impose an
14 exclusivity condition.

15 Q. (By Mr. Swanson) Well, would that be 12:32:50
16 charging something to earn a return on Apple's
17 intellectual property? Is that exclusionary?

18 MR. LOPEZ: Objection.

19 THE DEPONENT: I don't think it would be,
20 because it's being conditioned on who you 12:33:05

21 distribute through. If -- if instead there's
22 something just about the app that was different and
23 they would charge 299 whether the app was run on --
24 distributed through Apple or by somebody else, that
25 would be one thing. But to only charge more 12:33:18

1 because you are distributing through a rival app 12:33:20
2 distributor is manipulating the price to try to
3 penalize rivalry and thus imposing an effective
4 exclusivity condition.

5 MR. LOPEZ: Mr. Swanson, we've been going 12:33:35
6 about an hour, so let's take a break soon, please.

7 MR. SWANSON: Yeah, okay. Why don't we.
8 Can we keep it to ten minutes this time?

9 MR. LOPEZ: Yeah.

10 MR. SWANSON: Okay. Great. 12:33:43

11 THE VIDEOGRAPHER: We're going off the
12 record at 12:33 p.m. This is end of media 2.

13 (Recess taken.)

14 THE VIDEOGRAPHER: We're on the record at
15 1:18 p.m. This is the beginning of Media No. 3 in 01:18:42
16 the deposition of Einer Elhauge.

17 Q. (By Mr. Swanson) Okay. Welcome back.

18 Professor, do you agree that the purpose
19 of market definition is to identify substitutes
20 that are relevant for evaluating the competitive 01:18:59
21 constraints on the party at issue?

22 A. That's one of the reasons for market
23 definition, yes.

24 Q. And do you agree that products don't need
25 to be identical to be substitutes? 01:19:13

1 A. Yes. 01:19:16

2 Q. What are the substitute products in the
3 market you define?

4 A. Substitutes would be any alternative way
5 of distributing iOS apps or iOS in-app 01:19:29
6 transactions.

7 Q. Is it your opinion that when a
8 transaction platform sells transactions that all
9 transactions sold on the platform necessarily
10 belong in the same product market? 01:19:49

11 A. I think -- well, at least in this case I
12 think so, unless there's some distinguishing
13 feature among them or if one can justifies a -- a
14 price discrimination market. But with those
15 exceptions, I think it would mean that the -- the 01:20:10
16 underlying product is generally the same and
17 certainly it's the same here.

18 Q. So you can't -- well, can you identify
19 any other circumstances where transactions on a
20 platform would fall into different product markets? 01:20:27

21 A. Well, we talked about in the morning I
22 think that the market for distribution of fee apps,
23 even though those are also transactions that
24 involve the same kind of product, are probably a
25 different price discrimination market and therefore 01:20:52

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1 can be distinguished for that reason. 01:20:55

2 Q. And it's your opinion that transactions
3 sold on a platform can fall into different
4 geographic markets; is that correct?

5 A. They could, yes. 01:21:12

6 Q. Do they in this case?

7 A. Yes. In this case I define, at least for
8 purposes of the class report, a U.S. market
9 following what the Apple experts concluded for game
10 transactions in the Epic case. 01:21:29

11 Q. Is there a geographic market for every
12 country in which the App Store has a storefront in
13 your opinion?

14 A. I haven't investigated whether there's a
15 separate geographic market for every nation where 01:21:44
16 there's a storefront.

17 Q. Have you investigated whether there is a
18 geographic market for China?

19 A. I haven't investigated whether there's a
20 separate geographic market for China. 01:21:57

21 Q. Okay. Is -- are -- are you familiar with
22 the app that Mr. Cameron offers?

23 A. I -- I -- I -- I'm -- I'm not familiar
24 with it, no.

25 Q. So you haven't heard of Lil' BabyNames, 01:22:19

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1 the app, before? 01:22:21

2 A. I -- I think in some discussion I heard
3 somebody talk about it, but I've -- I have never
4 seen it or used it.

5 Q. You understand that Mr. Cameron's app is 01:22:33
6 a paid download?

7 A. I assume so, since he's in the class.

8 Q. Do you understand that his app does not
9 have any in-app purchase option?

10 A. I -- I haven't investigated that. 01:22:50

11 Q. Okay. Is it your opinion that paid
12 downloads of Mr. Cameron's app are interchangeable
13 reasonably with all other paid downloads and in-app
14 purchases through the App Store?

15 MR. LOPEZ: Object to the form. 01:23:09

16 THE DEPONENT: The -- the apps may be
17 different, but the -- the transaction of
18 downloading is the same. So I think it's just like
19 credit card transactions. As I say, you can -- you
20 can use credit cards to buy everything from cars to 01:23:22

21 toilet paper. That doesn't mean that there's not a
22 credit card transaction market that is -- that
23 covers them both. So I think it's the same thing
24 here. But you distinguished between app markets
25 and the app distribution market for iOS apps. 01:23:39

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1 Q. (By Mr. Swanson) Does a merchant 01:23:45
2 participate in the credit card transactions market
3 if it does not accept American Express cards?

4 A. It might, if there's a common credit card
5 transaction market with AMEX and -- and MasterCard 01:23:58
6 and Visa.

7 Q. Well, is that what you were referring to
8 earlier, a common credit card transaction market
9 with all of the major credit cards?

10 A. That -- yeah. And so I think -- if we're 01:24:18
11 talking about the AMEX. If we're talking about the
12 AMEX case, I believe that was the market that was
13 the one that they analyzed in that case.

14 Q. Do consumers participate in the credit
15 card transaction market if they have only one 01:24:32
16 credit card?

17 A. Yes.

18 Q. So to participate in a two-sided
19 transaction market, one doesn't need to possess all
20 the means to transact in that market? 01:24:47

21 A. Yeah, you don't have every credit card in
22 order to be in the credit card market.

23 Q. And a merchant that accepted only
24 American Express would be in that market, just as a
25 merchant that accepted only Visa and MasterCard 01:25:08

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1 would be in that market? 01:25:11

2 A. Yes.

3 Q. In -- in your report you go through a

4 ranking of substitutes to the App Store from

5 inclusive to most distant; is that a fair 01:25:25

6 statement?

7 A. I missed the last part of that question.

8 I -- I go through a ranking and then what did you

9 say?

10 Q. You go through a ranking of substitutes 01:25:34

11 to App Store transactions from the closest to the

12 most distant substitutes; is that -- is that a fair

13 statement?

14 A. So I guess I would add the word "iOS"

15 before "app," I think, in that sentence. 01:25:49

16 Q. Fair enough.

17 You are of the opinion that the closest

18 substitutes are other iOS app distributors and

19 direct distribution; is that correct?

20 A. Yes. 01:26:07

21 Q. And your opinion is that non-iOS

22 transaction platforms are more distant partial

23 substitutes; is that correct?

24 A. Yes.

25 Q. You determine how close substitutes are 01:26:23

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1 by assessing how likely it is that both developer 01:26:26
2 and consumer demand would shift from Apple's iOS
3 App Store to the potential substitute in response
4 to a price change; is that -- is that correct?

5 THE DEPONENT: Can you say that sentence 01:26:41
6 again.

7 Q. (By Mr. Swanson) Sure.

8 You determine how close substitutes are
9 by assessing how likely it is that both developer
10 and consumer demand would shift from Apple's iOS 01:26:53
11 App Store to the potential substitute in response
12 to price changes?

13 A. Yes. And I guess the only thing I might
14 add to that is that it's for the same set of
15 transactions. So if they would use it for 01:27:12
16 something else that -- that's got a substitute for
17 the transactions, they'd use on the iOS
18 App Store.

19 Q. So what do you mean by "the same set of
20 transactions"? 01:27:26

21 A. Well, if you have -- you know, if you
22 have a certain set of transactions, I suppose it
23 doesn't change at all, but if you add another
24 option out there, say some, I don't know, new --
25 new gaming console, but nobody is actually changing 01:27:39

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1 any of the transactions they're now doing for iOS 01:27:42
2 to the gaming console, they're just adding other
3 transactions on the gaming console, that is not a
4 shift of demand for those transactions and thus
5 would not be relevant to figuring out whether it 01:27:56
6 should -- has a pricing constraint and therefore
7 wouldn't be in the market.

8 Q. Is it your opinion that a shift by
9 developers but not by consumers at the same time
10 would not be constraint? 01:28:18

11 A. Well, I guess it -- it all depends on
12 whether the shift by the developers lowers the
13 number of transactions on the iOS app platform --
14 app distribution platform.

15 Q. If -- if developers shifting away reduces 01:28:38
16 the number of transactions, would indirect network
17 effects lead to lesser consumer participation on
18 the platform?

19 MR. LOPEZ: Objection.

20 THE DEPONENT: It -- it -- it might and 01:28:56
21 lead to more consumer participation in other
22 platforms. But the developer could use both as
23 well, so I don't know. You'd have to specify more
24 in a hypothetical. So if the developer is still --
25 all the developers are still available on the 01:29:13

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1 App Store, then I wouldn't expect that to change 01:29:15
2 consumer -- the network effect on the consumer
3 interest.

4 Q. (By Mr. Swanson) What empirical analysis
5 did you conduct to assess the extent to which 01:29:29
6 developer and consumer demand would shift to other
7 platforms in response to a price change?

8 MS. MANIFOLD: Objection.

9 THE DEPONENT: Yeah. So I -- I reviewed,
10 I guess, the -- the facts and their economic 01:29:42
11 significance. I looked at some of the percentages
12 involved, how many were some of the positive
13 substitutes. There were statistics calculated
14 about such things or -- or found about such things
15 as how many people who own iPhones actually own an 01:30:01
16 Android and could thus possibly switch to using an
17 Android app on a smartphone.

18 Similar issues for gaming consoles and
19 computers for the percentage of iOS apps that are
20 even available in the non-iOS version, calculated 01:30:22
21 some figures relative to that that bore on the
22 likelihood of substitution and then, in terms of
23 the market definition, validated that using
24 statistics that bore on the horizontal -- the
25 hypothetical monopolist test and determined that 01:30:43

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1 given the fact that the Apple prices were well 01:30:48
2 above the competitive level, according to the
3 reports of Professor Economides and Professor Evans
4 and my own analysis, that their profit margins were
5 highly in excess of competitive levels, that that 01:31:06
6 indicated that -- those statistics indicated that
7 the market defined as iOS app distribution and
8 in-app purchases was -- the market was no broader
9 with that -- to that. That market was a valid
10 market under the hypothetical monopolist test. 01:31:27

11 Q. (By Mr. Swanson) What -- what evidence
12 did you have or empirical data did you have of a
13 price increase on the App Store?

14 A. Well, they -- they didn't change their
15 prices. There -- there wasn't any -- price 01:31:46
16 increase. The prices were already at the
17 competitive -- at -- at the monopoly level. It's
18 been at the monopoly level all along.

19 Q. Was that an assumption of your analysis
20 or a conclusion? 01:32:04

21 A. It's a conclusion of my analysis.

22 Q. Isn't it a fact that the data, for
23 example, reflected in Professor Economides' report,
24 and, I think, your own analysis shows that over the
25 class period, the average commission on the 01:32:20

1 App Store has declined by 10 percent? 01:32:23

2 A. I don't know if it's 10 percent. It's

3 declined -- the average commission has declined

4 slightly, but that's because they introduced the

5 15 percent tier. And that's -- that's really to 01:32:40

6 purchase services. So I wouldn't really just call

7 that a reduction in price for the distribution

8 services. They're offering the 15 percent in order

9 to get developers -- certain developers to invest

10 either in video integration with Apple TV or to 01:32:54

11 invest in maintaining subscriptions for longer than

12 one year, both of which benefit the Apple.

13 So those aren't -- those aren't a

14 response to competition, I guess, is what I would

15 stress. Those -- they don't indicate waning 01:33:11

16 monopoly power. There's something even an absolute

17 monopolist would want to give discounts in exchange

18 for investments that are profitable to the

19 monopolist.

20 Q. Do you agree that Apple would get 01:33:27

21 discounts in the but-for world?

22 A. I think they would still have two pricing

23 tiers in the but-for world, that the same economic

24 motivation that makes them maintain a differential

25 in the current world would also operate in the -- 01:33:43

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1 in the but-for world because they would still want 01:33:45
2 investment in video integration and they would
3 still want investment in subscriber retention.

4 Q. So the but-for world is competitive, but
5 in your opinion, Apple would not give discounts; is 01:33:56
6 that correct?

7 A. I don't know how you got that from my
8 statement. I -- I don't know if you call it a
9 discount after getting something in exchange. I
10 think there would still be two price tiers. So 01:34:09
11 there would still be -- it wouldn't be
12 30 percent -- 50 -- 15 percent. It would two
13 different commissions, both lower, but it would
14 still be the case that the video partners and those
15 who retain subscribers for longer than a year would 01:34:23
16 pay a lower commission than the base commission
17 rate.

18 Q. And your opinion is that Apple would not
19 give any discount from those two assumed but-for
20 world price tiers; is that correct? 01:34:41

21 MS. MANIFOLD: Objection.

22 THE DEPONENT: Can you say the question
23 again.

24 Q. (By Mr. Swanson) And your assumption is
25 that Apple would not give any discount from those 01:34:51

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1 two assumed price tiers in a but-for world? 01:34:57

2 A. I wouldn't call it an assumption. I
3 would call it a conclusion based on my economic
4 analysis.

5 Q. So is it your assumption that -- based on 01:35:07
6 your conclusion that there will be two price tiers
7 in the but-for world that Apple, in the but-for
8 world -- in the but-for world, will give no
9 discounts?

10 A. I -- I conclude from my economic analysis 01:35:19
11 that Apple would only have two tiers in the but-for
12 world. I don't assume the conclusion.

13 Q. Do you assume or conclude that Apple will
14 give no discounts in the but-for world?

15 A. I -- I -- 01:35:38

16 MR. LOPEZ: Objection.

17 THE DEPONENT: -- I don't assume it. I
18 conclude it.

19 Q. (By Mr. Swanson) Okay. You conclude
20 that there will be no discounts by Apple in the 01:35:41
21 but-for world?

22 A. No, I don't assume there's no discounts.
23 I just told you there would be two tiers. And
24 since -- at least the way you're using the
25 terminology, I think you're calling the lower price 01:35:50

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1 tier a discount from the base one. So obviously 01:35:53
2 I'm saying that that would continue, which is -- so
3 I'm not sure -- I'm not sure what you're driving at
4 when you claim that I'm saying that there's no
5 discounts. There's -- there's going to be two 01:36:03
6 tiers, and one of them's lower than the other.
7 Q. Well, either someone's taking this down
8 wrong or I'm reading it wrong.
9 "Question: Do you assume or conclude
10 that Apple will give no discounts in the but-for 01:36:15
11 world?
12 Objection.
13 The Deponent: I don't assume it. I
14 conclude it."
15 A. I was focusing on the -- I'm sorry. I -- 01:36:24
16 I misspoke then. I was just focusing on the first
17 part of your -- you keep trying to use assumption
18 instead of conclusion.
19 I -- I -- there's -- there's not going to
20 be discount from the two tiers, but there would 01:36:35
21 still be the two tiers. So I guess in part,
22 there's a question, what do you mean by a discount.
23 If you mean some individually negotiated discount
24 for particular app developers, I don't think so.
25 And I'm not exactly sure what you want to call the 01:36:50

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1 fact that they're going to have a lower price tier 01:36:53
2 where they get some benefit out of it. You could
3 call that a price discount, but I -- or you could
4 call it a payment for special services rendered.

5 But any event, the -- the fact of my 01:37:05
6 conclusion is there would be two tiers in the
7 but-for world that commissions Apple's charging and
8 the lower of those two tiers will would be based on
9 the same conditions about the video program,
10 partnership program, and the subscriber retention 01:37:20
11 program.

12 Q. How about the small business program?

13 A. That's a good question whether that would
14 be true in the but-for world, since Mr. Cook
15 testified that one of the reasons they adopted it 01:37:38
16 involved this litigation. So I guess in a but-for
17 world, this litigation will not be an issue, so
18 perhaps that wouldn't have been adopted.

19 Q. So for purposes of assessing impact and
20 damages, your testimony is that the finder of fact 01:37:58
21 should assume that the small business program would
22 not apply in the but-for world?

23 A. No, I -- I -- I wouldn't say that --

24 MR. LOPEZ: Objection.

25 THE DEPONENT: -- because Mr. Cook 01:38:16

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1 testified that -- as well that it was driven by 01:38:17
2 COVID and concerned the economy, concerned about
3 small developers. So all of those, that would be
4 true in the but-for world. So I think -- you know,
5 the data that I analyzed in this report didn't 01:38:37
6 include any -- the -- the -- the very recent time
7 period during which the small developer discount
8 has been offered. So I haven't -- I haven't done
9 any analysis of that yet.

10 But given the -- the first part of his 01:38:55
11 testimony, that would suggest they would give that
12 discount in the but-for world as well.

13 Q. (By Mr. Swanson) So in your opinion, in
14 the but-for world those were eligible for the small
15 business program would receive the lower tier 01:39:10
16 but-for price or commission?

17 A. Yes. I think likely, yes.

18 Q. So you think that the small business
19 program indeed was not implemented because of the
20 litigation? 01:39:30

21 MR. LOPEZ: Objection.

22 THE DEPONENT: I -- I -- I don't know.

23 All I have is Tim Cook's testimony on -- on the
24 motivation for that. And obviously it didn't exist
25 until 2021, so it came relatively late in the class 01:39:47

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1 period. 01:39:55

2 Q. (By Mr. Swanson) Is it your
3 understanding that developers will be seeking
4 damages for the period through 2021?

5 A. Through what date in -- I think they're 01:40:12
6 seeking damages for everything since -- I'm
7 forgetting the beginning of the class period. I
8 think it was 2015, is it?

9 Q. Yeah, I believe so. Beginning of the
10 class period. 01:40:28

11 A. Yeah. So everything from then until, I
12 guess, whenever the -- the trial lasts. But I've
13 only seen data through September 2019 so far.

14 Q. So it's important for you to make a
15 determination as to whether the small business 01:40:46
16 program would exist in the but-for world, correct?

17 A. Not for the time period that I've covered
18 so far. But for the period after it's introduced,
19 then I think that would be a -- a relevant inquiry,
20 whether we think that price would have existed in 01:41:07
21 the but-for world or not.

22 Q. Okay. And you believe that in fact, that
23 program would exist in the but-for world?

24 A. I think if you credit Tim Cook's
25 testimony that suggested he was motivated by COVID 01:41:20

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1 and also political concerns for small developers, 01:41:26
2 then those reasons would equally apply in the
3 but-for world, so I think we -- we would think that
4 there -- they maintain a differential. It would
5 just be a differential from a lower price. So I'd 01:41:39
6 expect them to be at the second tier, whatever, the
7 same tier that the video partners and the
8 subscriber -- those retained subscribers for more
9 than one year get.

10 Q. Is the small business program a -- a 01:41:54
11 reflection of economic price discrimination?

12 A. Not according to the testimony of
13 Tim Cook. He didn't -- he didn't list any markets
14 driven reason or competitive reason for the price
15 difference. He says it was more about political or 01:42:16
16 litigation concerns, which is sort of the opposite
17 of that. And that's, as I say in the report, I
18 think actually an affirmative indicator of market
19 power.

20 Q. Is it your opinion as an economist, which 01:42:33
21 is what you profess to be, correct, that the small
22 business program is price discrimination?

23 MR. LOPEZ: Object to form.

24 THE DEPONENT: It's a price difference,
25 but it's not a price difference that was motivated 01:42:44

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1 by market conditions according to Tim Cook. 01:42:47

2 Q. (By Mr. Swanson) Is that the economic
3 definition of price discrimination? Motivation is
4 how you define price discrimination as an
5 economist?

01:43:01

6 A. Well, I mean, generally all the economic
7 analysis is of -- of how to maximize profits with
8 price discrimination because of economic analysis.

9 In terms of -- you know, I -- I think the abstract
10 distinctions of any price difference as price

01:43:18

11 discrimination really comes from antitrust law
12 rather, I think, than from -- I mean, the economic
13 literature doesn't -- is not -- does not analyze
14 price discrimination that is not motivated by

15 market factors as far as -- I haven't seen

01:43:32

16 literature that analyzes non-market-based price
17 discrimination.

18 Q. Well, are you familiar with first, second
19 and third degree price discrimination?

20 A. Yes.

01:43:45

21 Q. And -- and what is first degree price
22 discrimination?

23 A. Basically perfect price discrimination,
24 where you figure out for each particular individual
25 customer in the market how much they'd be willing

01:43:58

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1 to pay. 01:44:01

2 Q. And what is second degree price
3 discrimination?

4 A. Second degree -- I forget now which is
5 second and third. But the other ones are basically 01:44:07

6 imperfect forms of price discrimination. One is
7 where you identify different prices for different
8 customers based on characteristics that correlate
9 with their likely willingness to pay are imperfect
10 and then the other one is you use sort of a common 01:44:28

11 pricing schedule for everybody that has the effect
12 of creating price discrimination and charging
13 people different prices in a way that correlates,
14 again imperfectly, to their willingness to pay.

15 Q. Is the small business program an instance 01:44:47
16 of second or third degree price discrimination?

17 A. No. It doesn't appear to be.

18 Q. Is that a no or a no --

19 A. Well, no. I mean, I --

20 Q. -- could be -- 01:45:05

21 A. The evidence to the contrary from an
22 economic perspective is one that the prices are not
23 being based upon willingness to pay. I mean, there
24 was obviously -- Apple was not distinguishing on
25 this for many, many years. The only change in 01:45:18

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1 2021 -- so it wouldn't make any sense that suddenly 01:45:23
2 in 2021 this would be a reason for it -- because we
3 also have the evidence that Steam, if anything, has
4 the opposite kind of price difference where they
5 charge more money or higher percentage, I should 01:45:36
6 say, to apps that have less sales and -- I mean
7 more -- more -- more -- less sales and they charge
8 a smaller commission to apps have a lot of sales.

9 Q. And was that price discrimination of the
10 second or third degree? 01:45:54

11 A. I think that's not price discrimination
12 of that sort. I think it's a price difference.
13 There it seems to me more plausible that it just
14 reflects something about Steam's costs per app
15 because there's economies of scale in distributing 01:46:16
16 apps that have lots and lots of sales, so you might
17 want to give them a smaller commission because
18 you're -- even with a smaller commission, you're
19 charging them a lot more absolute dollars. So I
20 suspect that's more what drove that. And -- and 01:46:31
21 so, you know, if the same factors operate, which
22 you would think would in the iOS app distribution
23 market, you might have expected the opposite sort
24 of pricing. But -- but Apple has always had a
25 policy of treating small developers at least as 01:46:48

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1 well, if not better, than large developers. 01:46:51

2 Q. Is it your testimony as an economist, not
3 a lawyer, but as an economist, that the small
4 business program is not second or third degree
5 price discrimination? 01:47:05

6 A. Yeah, I don't think it is. It's a price
7 difference, but I would not say it's either second
8 or third degree price discrimination because it's
9 not -- it's not designed to maximize profits by
10 pricing higher to those with a higher willingness 01:47:18
11 to pay.

12 Q. And the same question with respect to
13 Steam's price tiers post 2018?

14 A. Yeah --

15 MR. LOPEZ: Objection. 01:47:33

16 THE DEPONENT: -- for Steam, I mean, I --
17 it's -- I don't have as much direct testimony about
18 why Steam's doing it, but absent other evidence --
19 I'd need some evidence of why they might think that
20 a higher rate should -- that that's the smaller 01:47:48
21 developers or at least the smaller apps, developers
22 of smaller revenue apps, that they would be willing
23 to pay more than the others, maybe I might. My
24 intuition would be that's probably not the driver,
25 it's probably something about economies of scale. 01:48:08

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1 Q. (By Mr. Swanson) Going back to average 01:48:13
2 commission on the App Store, is it your testimony
3 that since 2015, the average commission on the
4 App Store has not declined by 10 percent?

5 A. There's been some decline. I can't 01:48:29
6 remember whether it was by 10 percent. I think
7 it's just a few percentage points was my
8 recollection, and that it's not a -- there's been
9 no decline in either commission tier. It's just a
10 greater portion of the market is now at the 01:48:44
11 15 percent commission tier. So there's not really
12 a drop in prices. It's just -- you know,
13 they're -- they're getting more investment in the
14 video program and in subscriber retention, which,
15 as I mentioned, is not really -- not really a drop 01:49:00
16 in price. It's kind of a purchase of investment
17 services.

18 Q. So let's be crystal clear on this.
19 Focused on the average commission that the class
20 paid since 2015, it's your testimony you don't 01:49:15
21 think that that average commission has declined by
22 10 percent?

23 A. I give the same answer I gave last time.
24 I don't have a different answer to the same
25 question. 01:49:30

1 Q. You think it's a couple of percent. So 01:49:30
2 you think it's 3 percent, that it's dropped
3 3 percent?

4 A. Are you talking a percent like -- are you
5 talking about percentage points or are you talking 01:49:41
6 a percent? So if -- if the commission -- if the
7 average commission, say, went down from 30 to
8 27 percent, are you calling it a 3 percent drop?
9 Are you calling that a 10 percent drop because
10 3 percent is 10 percent of 30? 01:49:52

11 Q. Well, 30 percent is the price, which I
12 believe you testified to. Then I think a
13 27 percent commission would be a 10 percent drop.
14 Wouldn't you agree?

15 A. Okay. Well, I -- I was precise to say 01:50:04
16 percentage points in my answer. That's why, when
17 you talk about percentages you have to ask is it
18 percentage points or is it percentage of original
19 price to be clear.

20 My recollection was it was a couple 01:50:15
21 percentage points and -- but it could possibly be
22 as many as three percentage points, maybe. I -- I
23 don't really recall, but I -- what I do know is it
24 did not reflect any drop in actual commission
25 rates. It just -- it just reflected a different 01:50:37

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1 ratio of those at the two constant commission 01:50:42
2 tiers.

3 Q. So what is the relevance of the average
4 commission?

5 A. Well, it's the average -- I mean, that -- 01:50:53
6 that is being charged in the market and the
7 average -- I mean, I think the average commission
8 would fall in the but-for world, so you want to
9 compare it to some average now, but it would be
10 mediated to a drop in each tier. 01:51:06

11 Q. So --

12 A. But I -- I don't think there is any
13 economic relevance to the fact that in the actual
14 world, the average commission has dropped, at least
15 not in the sense of any indicator about market 01:51:19
16 power, both for the reason I've already given about
17 it's really just a mix, change over time that
18 reflects getting more services, but also because
19 what really matters is the but-for level, not the
20 past level. So I -- I wouldn't put any economic 01:51:36
21 significance on the statistic you're talking about
22 regarding the drop in average commission over time.

23 Q. Well, that wasn't my question.

24 Do you put any significance on average
25 commissions at all? 01:51:51

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A. Yeah. I mean, they're an indicator of
the average commission that's paid. So it's a
total amount being -- it enables you to calculate
the total amount being paid out there. And then to
compare that to a but-for average or to an average
in other markets provides a very useful indicator
of market power and anticompetitive effects.

8 Q. Should you be comparing the actual prices
9 charged as opposed to an average?

10 A. Well, average is an average of actual 01:52:24
11 prices, so -- so it does reflect actual prices. So
12 it's not -- it's not -- being actual and average is
13 not mutually exclusive.

14 Q. Okay. Well, then, the average price in
15 the actual world in your actual market has declined 01:52:39
16 by 10 percent. Do you dispute that?

17 MR. LOPEZ: Objection. Form.

18 THE DEPONENT: This average commission
19 has declined. I -- again, I -- if you want to show
20 me a chart or something I can look at, but I don't 01:52:51
21 recall the exact number of percentage points that
22 it had dropped over this period. But it does not
23 reflect any drop in either tier, as I've said.

24 Q. (By Mr. Swanson) Have you studied

25 whether the average commission price reduction on 01:53:09

1 the App Store has led consumers and developers to 01:53:13
2 shift from other platforms to the App Store?

3 A. I -- I haven't, because there hadn't been
4 any drop in either tier. So what -- whatever
5 category you fall into as a developer there's 01:53:36
6 nothing there that would cause a shift from other
7 platforms into the iOS platform because it's not
8 actually a drop into what they receive.

9 Q. Well, what -- have -- have you got any
10 data showing shifting behavior in response to a 01:54:02
11 price -- an actual world price increase on the
12 App Store?

13 A. Well, the price stayed constant, so there
14 was no shift. It's just been at monopoly levels
15 the entire time. There's no before or after period 01:54:22
16 that you can use in this case.

17 Q. You agree that cluster markets are
18 markets that consist of multiple products that are
19 not substitutes for each other, correct?

20 A. Yes, sometimes. Not -- not all mark- -- 01:54:43
21 things are not substitutes for each other as
22 cluster markets, but in a cluster market it does --
23 encompasses one market things that are not
24 substitutes for each other.

25 Q. Is your iOS app distribution market 01:54:54

1 definition a cluster market? 01:54:58

2 A. No.

3 Q. Isn't it true that your relevant market

4 groups together different types of nonsubstitute

5 app transactions? 01:55:11

6 A. No.

7 Q. Do you agree that the rationale for

8 clustering nonsubstitutable goods into a single

9 market must be regarded as a severe exception for

10 ordinary market definition criteria which define 01:55:25

11 markets in terms of substitutability?

12 MR. LOPEZ: Objection. Legal conclusion.

13 THE DEPONENT: I don't recall the severe

14 exception, no, because I -- I wouldn't put that

15 term out. There's -- I mean, things are often 01:55:39

16 considered part of a single product that are not

17 substitutes. Like shoes and shoelaces are not

18 substitutes for each other, but -- and we recognize

19 that the shoes with shoelaces is a single product.

20 So that comes up. And there's lots of cluster 01:55:54

21 markets like hospital services markets.

22 So I don't regard it as a severe

23 exception. I just regard it as a concept that, as

24 I discuss in my report, does not apply to this

25 market. 01:56:08

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1 Q. (By Mr. Swanson) Do you agree that the 01:56:10
2 critical question that must be answered when
3 determining whether a particular product should be
4 included in a cluster market is whether the items
5 are subject to the same competitive conditions? 01:56:18

6 A. Can you say that again.

7 Q. You agree that the critical question that
8 must be answered when determining whether a
9 particular product should be included in a cluster
10 market is whether the items are subject to the same 01:56:33
11 competitive conditions?

12 A. That seems overbroad as a statement
13 because often things are clustered together, not
14 subject to the same conditions, but rather because
15 there's a lot of economies of scope providing them 01:56:53
16 together, including in particular in hospital
17 services markets, where many services are clustered
18 together that are not subject to the same market
19 conditions.

20 Q. In your opinion, are there differences 01:57:11
21 between the substitution possibilities of different
22 groups of consumers on the App Store?

23 A. I'm not sure what you mean by that.

24 Q. You can't answer that question?

25 A. I don't understand the question. Could 01:57:28

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1 you clarify? 01:57:29

2 Q. Are there different groups of consumers
3 on the App Store who have different substitution
4 possibilities?

5 MS. MANIFOLD: Objection. 01:57:39

6 THE DEPONENT: Substitution possibilities
7 for what? For the apps that they want?

8 Q. (By Mr. Swanson) For the transactions
9 that they want to engage in.

10 MR. LOPEZ: Object to the form. 01:57:47

11 THE DEPONENT: Different substitution
12 possibilities.

13 I would say no, because Apple has
14 foreclosed all the substitution possibilities.
15 They -- they would be able to use rival app 01:57:58
16 distributors in the but-for world, but in the
17 actual world they have been foreclosed from doing
18 so.

19 Q. (By Mr. Swanson) Are you aware of the
20 app that named plaintiff Pure Sweat has offered? 01:58:12

21 A. I am not.

22 Q. Is there some reason why you haven't
23 studied the apps offered by the named plaintiffs?

24 A. Because I'm doing a -- a market-wide
25 economic analysis. I'm not doing a legal analysis 01:58:29

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1 of particular class members and their 01:58:34
2 representativeness.

3 Q. Well, if -- if your opinion that all of
4 the relative evidence is common to all developers,
5 wouldn't it be a good test to see whether or not 01:58:47
6 your opinions hold for the two named plaintiffs?

7 A. I think they -- they hold for all
8 identified members of the class, whether they're
9 named or not, for reasons that are general. Or --
10 or if they don't hold -- they don't hold for all of 01:59:06
11 them, then that's still a class-wide determination.
12 So I -- all the analysis I do applies across all
13 members of the class, named or unnamed.

14 Q. Okay. So you're convinced to a certainty
15 that your opinions apply to the apps and the 01:59:20
16 characteristics of the apps of the named
17 plaintiffs?

18 MR. LOPEZ: Object to form.

19 THE DEPONENT: If they're in the class,
20 it applies to their app distribution. I'm not -- 01:59:34
21 as I said already, I'm not defining markets by
22 apps. Apps differ from each other and can be in
23 different markets, but the -- what's common, just
24 as with credit card transactions, is the
25 transaction market. So I agree with 01:59:51

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1 Professor Schmalensee or Apple's expert in the Epic 01:59:54
2 case that here, the market is the transactions and
3 that is a common two-sided product common to all
4 the distribution. It's not -- it's not an
5 app-specific market. 02:00:08

6 Q. (By Mr. Swanson) Are you familiar with
7 the reader rule?

8 A. Yes.

9 Q. Okay. What is it?

10 A. It basically says if you make out-of-app 02:00:17
11 purchases of content, you can, you know, read them
12 on, say, your Kindle. You know, the Kindle in one
13 manifestation is offered as an iOS app.

14 Q. Are you sure of that? That -- that's
15 your understanding of the reader rule? 02:00:42

16 A. Yeah. I discuss in my report the reader
17 rule says, you have or such should be something you
18 purchased elsewhere and that, you know, for
19 preexisting customers, the reader provision. And
20 so one of the -- the class examples is the Kindle 02:01:00
21 reader.

22 Q. And before the reader rule, if an iOS
23 user wanted to buy content in the Kindle app,
24 Amazon would be charged the commission for that,
25 correct? 02:01:19

1 A. Well, I think they -- if you bought it 02:01:21

2 within the app, yes. So I really think that -- I'm

3 not sure whether anything was different before the

4 reader rule was announced. It just seems to me the

5 reader rule, what it does is just define the 02:01:34

6 boundaries of what an in-app transaction is by

7 being clear about what's out-of-app and what's

8 in-app.

9	Q. Does the reader rule apply identically to	
10	all apps?	02:01:46

11 A. It applies to all apps that offer similar
12 kinds of content like books, magazines, videos.

13 Q. So it depends on the genre of the app; is
14 that correct?

15 A. I think just depends upon what kind of 02:02:03
16 content. Let me see.

17 I was hoping for a -- a quote that might
18 have the -- the rule in detail. But I think
19 it's -- as I recall, it says, you know, it's got to
20 be a certain kind of content you purchase elsewhere 02:02:34
21 as opposed to, say, you know, like an interactive
22 program or something, because that would be
23 something like a video -- they specify what it is,
24 video magazines, maybe newspapers, books. It's --
25 it's that sort of one-directional content that is 02:02:50

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1 purchased elsewhere, but you can't put -- you can't 02:02:54
2 buy it in the app. That would be prohibited.

3 Q. If the finder of fact concludes that
4 there are multiple relevant markets, would it still
5 be your opinion that the evidence regarding market 02:03:11
6 power and conduct and impact for developers in one
7 market would be the same as the evidence regarding
8 market power conduct and impact in the other
9 markets?

10 MR. LOPEZ: Object to the form. 02:03:25
11 Objection.

12 THE DEPONENT: Well, at least for the one
13 contested issue I know about, I explicitly say in
14 the report yes, that even if one defines
15 separate -- the fact finder found separate relevant 02:03:36
16 markets for initial app distribution and subsequent
17 in-app purchases, my conclusions about power and
18 anticompetitive effects would be unaltered. We
19 just would have power in both and exclusive
20 restraints in both, but the total amount of 02:03:56
21 anticompetitive effect and the effect on
22 commissions would be the same.

23 Q. (By Mr. Swanson) What if -- what if the
24 finder of fact determined that there was a digital
25 game transaction market, a video streaming 02:04:08

1 transaction market and seven other markets that are 02:04:12
2 served by the App Store?

3 Would it be your opinion that the
4 evidence as to monopoly power, anticompetitive
5 conduct and impact would be exactly the same for 02:04:25
6 all developers, regardless of the market?

7 A. I think --

8 MR. LOPEZ: Objection.

9 THE DEPONENT: -- I'd have to know more
10 about what the basis for that finding would be, 02:04:34
11 given that we don't observe that sort of price
12 discrimination in the actual world. So --
13 you know. So -- so therefore, it's very easy in
14 the actual world. In your hypothetical world, I
15 think I'd need a lot more facts to figure out how 02:04:49
16 could they have reached that conclusion and would
17 whatever the reasons they gave for that conclusion
18 bear on the anticompetitive effects I predict or
19 not.

20 Q. (By Mr. Swanson) Isn't your assertion 02:05:02
21 that the correct definition of the relevant market
22 is the same for all class members dependent on the
23 assumption that there's only one relevant market?

24 A. Oh, no. I mean, if there was multiple
25 relevant markets, there was just a correct set, I 02:05:16

1 guess I would say, of market definitions. So 02:05:19
2 whatever the correct set is is a fact of the world
3 that is common to all class members. It's just
4 if -- in some hypothetical worlds, different
5 markets might cause different implications for 02:05:35
6 maybe some other issue. But -- but the market
7 definition itself would still be common to all
8 class members.

9 Q. Well, it wouldn't be common to a class
10 member who didn't participate in that market since 02:05:51
11 it wouldn't be relevant to that class member's
12 claim, would it?

13 A. Well, it would still be common to them.
14 I mean, the facts necessary to establish this would
15 be the -- and methodology -- all the evidence, 02:06:01
16 method and conclusion would all be common to them
17 and -- and -- and the other person in the class.

18 I wouldn't -- there was -- there's not
19 like a -- a correct market definition for one class
20 member and a different correct market definition 02:06:16
21 for other class members. So I think -- I think it
22 is common, even if there -- even if we incorrectly,
23 mind you, assume those kind of submarkets you were
24 talking about.

25 Q. Is it your opinion that the methodology 02:06:38

1 evidence and analysis used to define the relevant 02:06:41
2 market would be the same, even if every class
3 member brought a separate antitrust suit?

4 A. Yes. Everything I say in here in this
5 report I would have to do for an individual class 02:06:54
6 member as well.

7 Q. Do you agree that Epic was a member of
8 the class when the class action was filed?

9 A. I suppose it was. I don't -- maybe it
10 opted out of the class since it had it's own 02:07:10
11 lawsuit. I -- I don't know the details of that.

12 Q. So was the methodology, evidence and
13 analysis used to define the relevant market in the
14 Epic case the same that would be used in the
15 separate case by Donald Cameron? 02:07:25

16 MR. LOPEZ: Objection.

17 THE DEPONENT: Well, I mean, I think that
18 the correct market definition methodology would be
19 the same no matter who brings it because there's
20 only one correct market. I -- I think in the Epic 02:07:43
21 case -- I mean, obviously the Epic plaintiffs
22 reached a conclusion about dividing the app
23 distribution market and in-app distribution market
24 that was relevant to their claims there but isn't
25 relevant to me here. So I didn't reach that issue, 02:08:00

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1 but it's -- either way you resolve it would be a 02:08:03
2 common issue.

3 Q. (By Mr. Swanson) You mentioned your
4 hypothetical monopolist test.

5 You -- you looked at a profit-maximizing 02:08:20
6 price that Apple charges, correct?

7 A. Yes.

8 Q. And that was the starting point for your
9 hypothetical monopolist analysis; is that correct?

10 A. Well, I think the starting point was to 02:08:46
11 order the substitutes and then to pick -- then
12 start with a narrow set and ask for that narrow
13 set, could they -- did the evidence indicate they
14 were able to raise prices significantly above
15 competitive levels. 02:09:04

16 Q. What -- what profit-maximizing price did
17 you look at for Apple?

18 MS. MANIFOLD: Objection.

19 THE DEPONENT: Well, I'm looking at the
20 price that they actually charge and whether they're 02:09:15
21 able to sustain that, even though it's much higher
22 than a competitive level.

23 Q. (By Mr. Swanson) So you didn't look at
24 the average commission level?

25 A. I did look at the average commission 02:09:32

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1 level, yes. 02:09:34

2 Q. Okay. So you found the average
3 commission level to be meaningful in this context?

4 A. I think the difference between it and
5 competitive levels is meaningful and statistic that 02:09:44

6 you can apply across the market. What I was saying
7 was not particularly meaningful was the slight drop
8 over time of Apple's average commission because it
9 just didn't -- it didn't indicate any drop in
10 prices, it just indicated a different mix of types 02:10:08

11 of developers and investments.

12 Q. Well, to apply the hypothetical
13 monopolist test, then, is it your testimony that
14 you should look at the price, not the mix?

15 A. No, I think to apply the hypothetical 02:10:19

16 monopolist test it makes sense to use the average
17 price because the -- the benchmarks that we have
18 for the but-for world, you know, have to use some
19 sort of average as well so that it is -- I think --
20 I think it's a good measure of the overall power in 02:10:39

21 the market.

22 Q. Does the profit-maximizing price you
23 calculate for your hypothetical monopolist test
24 exclude free transactions?

25 A. Yes. 02:11:00

1 Q. So the -- the price you used for the 02:11:03
2 hypothetical monopolist test would be the same,
3 regardless of whether free transactions were
4 1 percent or 99 percent of all transactions?

5 A. Well, I think they're in a different 02:11:16
6 market, as I said. But they are mathematically
7 undefined. There is no commission percentage for
8 free transactions because zero over zero is not a
9 mathematically defined thing, so it wouldn't -- I
10 mean, considering it wouldn't alter the average 02:11:33
11 commission and it wouldn't alter the market shares
12 at all either.

13 Q. Well, there is a price. It's zero, isn't
14 there, regardless of whether you want to divide by
15 zero or not, there's a price -- or multiplied by 02:11:50
16 zero?

17 A. Well, there's not a percentage-based
18 commission, zero resid- -- because there's no --
19 it's zero of -- over zero. And so this is where I
20 differ with Apple's expert. I think it was maybe 02:12:01
21 Lafontaine or maybe Professor Hitt, I'm forgetting
22 right now, but where they try to include zero over
23 zero as a zero dollar -- a 0 percent commission and
24 thus, you know, I think in any mathematically
25 incorrect way try to say that that was lowering the 02:12:21

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1 average commission. It's not. It's just 02:12:24
2 mathematically undefined.

3 Q. So if Apple gave away all transactions
4 for free, you would claim that the conduct was
5 still anticompetitive? 02:12:35

6 A. If it's giving everything for free --

7 Q. Even though you couldn't calculate an
8 average --

9 A. Even -- even -- well, if it's giving
10 everything away for free because -- even when 02:12:49
11 developers charge an app price --

12 Q. Yes.

13 A. -- that you're saying Apple to say,
14 that's okay, you charge whatever you want, it's
15 free? 02:13:01

16 I don't know. I'd have to think about
17 that. I guess maybe there would be a predatory
18 pricing claim if they're charging a lot less than,
19 you know, for marginal costs for providing the
20 service. I'd have -- you know, I'd have to see 02:13:16
21 what the -- what anticompetitive effects that might
22 have, if any. But I don't know. I don't -- we
23 have to know a lot more about this hypothetical
24 world.

25 Q. In your hypothetical monopolist test, 02:13:28

1 when you are considering whether Apple's 02:13:32
2 profit-maximizing price is 5 percent higher than
3 commissions in competitive markets, you look at one
4 of Professor Economides' yardsticks.

5 Do you recall that? 02:13:47

6 A. I think I looked at both of his.

7 Q. Well, for -- for competitive markets
8 you -- you looked at two of his commissions, but
9 one of them you looked at from the standpoint of
10 competitive markets, as I recall -- 02:14:01

11 A. Not --

12 Q. -- perhaps. Correct?

13 A. Both his but-for and his -- and, yes,
14 the -- the Windows app distribution market.

15 Q. Yes. Let's call it the Windows yardstick 02:14:13
16 if -- if that helps to identify it.

17 You looked at the Professor Economides'
18 Windows yardstick, correct?

19 A. Yes.

20 Q. And have you verified the accuracy of 02:14:24
21 Professor Economides' calculations for the Windows
22 yardstick?

23 A. No. My -- as I say in my report, that
24 was a conclusion I offer on the premise that if --
25 if his analysis were found to be reliable by the 02:14:41

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1 finder of fact, it would produce the conclusion 02:14:44

2 that I -- I draw from it.

3 Q. Are you offering the opinion that his
4 Windows yardstick is reliable?

5 A. I am not independently assessing his 02:14:55
6 yardstick.

7 Q. You also considered in connection with
8 your hypothetical monopolist test whether Apple's
9 profit-maximizing commission in the actual world is
10 higher than commissions that other experts find 02:15:11
11 would have prevailed in the but-for world, correct?

12 A. Yes.

13 Q. And there, Professor Economides has
14 another yardstick which you looked at. Should we
15 call that the but-for world yardstick? 02:15:31

16 A. Sure.

17 Q. Okay. Did you consider
18 Professor Economides' but-for world yardstick to be
19 a reliable economic model?

20 A. I didn't do any independent assessment of 02:15:45
21 it. I mean, it and -- and the other one you talked
22 about certainly looked reasonable, but I haven't
23 done an independent economic analysis. I'm just
24 drawing the inference assuming it's reliable and
25 correct, this is what the implications would be for 02:16:02

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1 a market definition. 02:16:05

2 Q. So you didn't indicate in your report
3 that you thought Professor Economides' but-for
4 world yardstick involved a reliable economic model?

5 A. I -- I don't think I offer an affirmative 02:16:18

6 opinion about that. I simply said -- I offered the
7 conditional one and I said that yes, I -- in
8 paragraph 119 what I said was a conclusion that

9 either of their models was reliable would be
10 independently sufficient to establish that the 02:16:33

11 domestic iOS app distribution -- it should say
12 market there -- was sufficiently broad under the
13 hypothetical monopolist test.

14 Q. Turn to paragraph 115 on page 60.

15 A. Okay. 02:16:52

16 Q. There you say, "Reliable economic models
17 indicating that the average commission in the
18 domestic iOS app distribution market would be at
19 least 5 percent lower if there were competition in

20 the market would also be sufficient to establish 02:17:01

21 that this market is sufficiently broad."

22 So are you or are you not saying
23 Professor Economides' yardstick, which you refer to
24 in paragraph 116, is a reliable economic model?

25 A. No. As I say in paragraph 119, I'm 02:17:22

1 saying if you conclude they are reliable, it has 02:17:23
2 its implication, which is just what I say in
3 paragraph 115. If you think there's a reliable
4 economic model indicating this, it has this
5 implication, and I point to two expert models that 02:17:33
6 are out there, his and Professor Evans'. And I
7 also point out that Apple has not put forward any
8 estimates of their own, this is the only expert
9 opinions we have about the but-for price; that
10 therefore, if either one of those is reliable, it 02:17:51
11 independently suffices to establish a -- a -- a
12 separate market.

13 But I myself am not, you know, vetting
14 one or the other. I mean, I don't find anything
15 unreliable in them, but I'm not -- did not 02:18:08
16 independently assess the reliability of their
17 methodology.

18 Q. What -- what is your opinion, then,
19 because you say you conducted a hypothetical
20 monopolist test and that requires finding that the 02:18:19
21 actual price is higher than the price in the
22 but-for world, doesn't it?

23 A. Yes, it's much higher than the price in
24 the but-for world.

25 Q. And if you have reliable evidence that 02:18:38

1 the but-for world price is lower, how can you reach 02:18:41
2 that conclusion about the hypothetical monopolist
3 test?

4 A. Well, I -- there's two reasons. One
5 is -- this is a conditional opinion here. If these 02:18:52
6 are -- if this is a reliable economic model, it
7 would independently show that the hypothetical
8 monopolist test was satisfied. I also point out
9 that the -- in the Windows app distribution market,
10 commissions are, in fact, lower and 02:19:10
11 Professor Economides has quantified the extent to
12 which they're lower.

13 And then in part 3, I analyze direct
14 evidence of Apple's power over price, which
15 independently, separate from what Economides and 02:19:26
16 Evans might say, also provides independent proof
17 that the hypothetical monopolist test was
18 satisfied.

19 And then finally, I discuss the
20 qualitative evidence that indicates that the 02:19:37
21 alternatives outside the positive market would not
22 be sufficiently constraining to prevent a 5 percent
23 price increase.

24 Q. And your conditional hypothetical
25 monopolist test, then, doesn't actually come to a 02:19:56

1 conclusion, does it, if you can't say that it rests 02:19:59
2 on reliable assessments?

3 MR. LOPEZ: Objection.

4 THE DEPONENT: I -- I -- I don't -- I
5 don't agree. You know, I think often that is 02:20:08

6 exactly what expert opinions say. They say if the
7 fact finder finds X, here is the economic
8 implication of it. You know, some issues were left

9 to the fact finder or, perhaps in this case, the
10 judge. And so I -- I am offering economic opinion 02:20:26

11 that this has an implication for market definition.

12 But I -- you know, I've never viewed as my role in

13 every case to recreate the wheel for everything

14 else some other expert might be doing. We have

15 our -- our different assignments. 02:20:45

16 Q. (By Mr. Swanson) And how does your

17 assignment differ from Professor Economides'?

18 A. Well, I'm doing market definition, but he

19 is the one doing damages and who investigated

20 the -- the issue of what the but-for level of 02:21:02

21 pricing would be.

22 Q. The but-for level of pricing of the

23 commission or the but-for level of pricing of apps?

24 MS. MANIFOLD: Objection.

25 THE DEPONENT: The commission. 02:21:17

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1 Q. (By Mr. Swanson) Which of you is 02:21:20
2 addressing the issue of common impact on class
3 members?

4 A. I think we both are for different issues.
5 I'm -- I -- the commonality of the fact of impact I 02:21:31
6 think would be me. And commonality on damages and
7 damages methodology would be Professor Economides.

8 Q. Does Professor Economides, as you
9 understand it, address commonality impact at all?

10 MR. LOPEZ: Objection. 02:21:51

11 THE DEPONENT: Well, I think -- I mean, I
12 think when you quantify damages for everybody you,
13 you know, along the way show that there is an
14 impact on everybody. So I guess the distinction is
15 my assessment of commonality of impact need not 02:22:05
16 involve a quantification of those damages. It's
17 enough for me that there is an impact on
18 everybody -- every member of the class, I should
19 say.

20 Q. (By Mr. Swanson) Are you aware that 02:22:19
21 Dr. Evans presented a hypothetical monopolist test
22 in the Epic case and concluded from it that Apple
23 was a monopolist because it could profitably raise
24 its current App Store commission by more than
25 5 percent? 02:22:34

1 A. I forget that part of it. If -- if you 02:22:38
2 did that, I would say that's a highly unduly
3 conservative test for market definition because of
4 the Cellophane Fallacy.

5 Q. Did you -- I apologize if I've asked you 02:22:51
6 this, but did you review all of Dr. Evans' expert
7 reports in the Epic case?

8 A. I -- I -- I looked at all of them. I
9 didn't read every single page of all of them.

10 Q. And are you relying on Dr. Evans' expert 02:23:10
11 reports in the Epic case?

12 A. Only -- well, there's a few things. I
13 think mainly just this, though, that I -- I'm
14 relying on him for the position that if he's right
15 about what the competitive but-for commission would 02:23:27
16 have been, that that opinion, coupled with my
17 analysis, suffices to show the relevant market that
18 I define.

19 MR. LOPEZ: Mr. Swanson, we've been going
20 a little over an hour. Is it a good time for a 02:23:44
21 break?

22 MR. SWANSON: Yeah, good time for a
23 break.

24 MR. LOPEZ: Ten minutes?

25 MR. SWANSON: Ten minutes. All right. 02:23:50

1 MR. LOPEZ: Thank you. 02:23:52

2 THE VIDEOGRAPHER: We're going off the
3 record at 2:23 p.m. This is the end of media 3.

4 (Recess taken.)

5 THE VIDEOGRAPHER: We're on the record at 02:35:58
6 2:36 p.m. This is the beginning of media 5 [sic]
7 in the deposition of Einer Elhauge.

8 Q. (By Mr. Swanson) All right. Professor,
9 how do you define monopoly power?

10 A. A substantial degree of market power. 02:36:18

11 Q. And how do you define market power?

12 A. Market power is a power over price or an
13 ability to exclude rivals.

14 Q. Is that a legal definition or an economic
15 definition? 02:36:38

16 A. Well, I think the market power -- the
17 first part of the power over price is an economic
18 definition. The power to exclude part I think
19 comes more from, I guess, the -- the legal
20 standards, but whether such a power exists is an 02:37:02
21 economic conclusion.

22 Q. As an economist do you agree that market
23 power is the ability to raise price profitably by
24 restricting output?

25 A. That could be one measure of it, yes. 02:37:17

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1 Q. Is there another measure as an economist 02:37:25
2 that you're aware of?

3 A. Well, yes, it could be just a power to
4 exclude even if you don't raise prices. And,
5 you know, depending -- the one problem with, I 02:37:41
6 guess, the power to exclude by reducing output, it
7 sort of already assumes you know your market
8 definitions. So sometimes it's easier to define it
9 as just a power to raise prices over competitive
10 levels. 02:37:58

11 Q. How many members of the developer class
12 possess monopoly power in the markets in which they
13 sell their apps?

14 MR. LOPEZ: Objection.

15 THE DEPONENT: I have not assessed the 02:38:10
16 market power of any individual app developer.

17 Q. (By Mr. Swanson) Did you believe it's
18 likely, based on what you do know, that many
19 members of the developer class possess monopoly
20 power in the markets in which they sell their apps? 02:38:23

21 MR. LOPEZ: Objection.

22 THE DEPONENT: I -- as I said, I just
23 have not analyzed that issue.

24 Q. (By Mr. Swanson) So you have no opinion
25 as to whether all developers have monopoly power or 02:38:32

1 no developers have monopoly power? 02:38:35

2 A. I think it's unlikely that all of them
3 have monopoly power. And whether any of them have
4 monopoly power, I -- I don't know. I haven't
5 investigated it. 02:38:55

6 Q. How do you define monopsony power?

7 A. Monopsony power is a -- is a -- the same
8 thing as monopoly power, only reversed as a buyer.
9 It's just a buyer of power to lower prices or,
10 you know, use your power to exclude rivals. 02:39:11

11 Q. Monopsony power, I'm sorry, is --
12 includes the power to exclude rivals?

13 A. Yes.

14 Q. Turn to page 9 of your report. I wanted
15 to focus on your summary conclusion 7D. 02:39:38

16 Okay. You state in paragraph 7D that
17 Apple has possessed monopoly power in the relevant
18 market you've defined throughout the class period.

19 Do you see that?

20 A. Yes. 02:40:05

21 Q. So are you referring to the period from
22 2015, 2015 forward?

23 A. Yes.

24 Q. Does your report contain any opinion of
25 yours about whether Apple had monopoly power, a 02:40:19

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1 substantial market power prior to the beginning of 02:40:21
2 the class period in 2015?

3 MS. MANIFOLD: Objection.

4 THE DEPONENT: I -- all the evidence I've
5 seen suggests that its power was the same before, 02:40:32
6 but I was only -- for purposes of the class-wide
7 opinions, I -- I -- it was only relevant to me to
8 reach opinions about during the class period.

9 Q. (By Mr. Swanson) So have you reached any
10 opinion about whether Apple has monopoly power in 02:40:50
11 2012?

12 MS. MANIFOLD: Objection.

13 THE DEPONENT: I believe so. I mean,
14 it's not -- not an opinion necessary for any of my
15 conclusions. But all the evidence I've seen would 02:41:03
16 indicate that its power went back to the inception
17 of the iPhone.

18 Q. (By Mr. Swanson) So your -- your belief,
19 although not an opinion you're expressing in this
20 case, is that Apple was a monopolist from its first 02:41:18
21 sale in the App Store?

22 A. I believe I said from the beginning it
23 imposed exclusivity and had a 100 percent market
24 share in that market from the evidence that I have
25 seen. 02:41:35

1 Q. So is that an opinion that you will offer 02:41:38
2 in this case?

3 MR. LOPEZ: Objection.

4 THE DEPONENT: It's not an affirmative
5 part necessary for my conclusions. I think it is 02:41:47
6 an opinion I might offer in rebuttal to certain
7 arguments that I've seen, but I haven't -- I don't
8 think it's necessary for any of my conclusions.

9 Q. (By Mr. Swanson) Did you -- are you
10 aware of Dr. Evans' opinion that Apple did not have 02:42:07
11 monopoly power at the inception of the App Store?

12 A. I'm not aware of -- of that opinion.

13 Q. If Dr. Evans had that opinion you
14 disagree with it?

15 A. Well, from the evidence I've seen yes. I 02:42:29
16 guess I'd have to see what evidence he offered
17 for -- for that conclusion. I mean, maybe he's
18 referring to the fact that initially there was no
19 paid apps, and so they -- they were just giving
20 their own apps certainly, but no app store, even. 02:42:45
21 So I'm not sure what he means by exactly the
22 inception of the iPhone, so I'd -- I'd have to look
23 more at his opinions to see what his basis is.

24 Q. So -- so is it -- is it an opinion of
25 yours or just a belief that Apple had monopoly 02:43:02

1 power in 2008? 02:43:07

2 MS. MANIFOLD: Objection.

3 THE DEPONENT: I guess I would say --

4 well, 2008, I -- I don't remember the exact date

5 when the App Store was first out and when they 02:43:16

6 first took paid apps.

7 Q. (By Mr. Swanson) Okay. 2008.

8 A. Well, I'm -- I -- I don't know that, but

9 maybe I'd have to look at that. So it's not --

10 it's not a belief in the sense it's not like a 02:43:31

11 belief of faith. It -- I would say it's a

12 preliminary opinion based upon the evidence that

13 I've seen. But if I see contrary evidence, I guess

14 I might draw a contrary conclusion about that. But

15 since I -- I didn't do a more thorough 02:43:50

16 investigation because it wasn't relevant to any of

17 my opinions on class or for this report in general.

18 Q. Okay. You calculated a market share on

19 what you, I think, deem to be market share for

20 Apple in what you called a broader, but incorrect, 02:44:13

21 market for mobile devices, for -- for -- for

22 distribution services on mobile devices.

23 Do you recall that?

24 A. Yeah, for app and digital in-app purchase

25 distribution services on mobile devices. 02:44:32

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1 Q. And -- and what is your definition of 02:44:34
2 mobile device?

3 A. It's basically, you know, smartphones and
4 tablets. So things you can carry around easily
5 with you without being, you know, tethered to 02:44:45
6 something bulkier.

7 Q. Are laptops or MacBooks with wireless
8 connections not mobile devices in your opinion?

9 A. I think they're different. They're
10 computers, although I do conservatively, for 02:45:02
11 purposes of defining the tablet market, include
12 certain laptops that have -- I can -- if I remember
13 there's some technical thing that some laptops kind
14 of resemble tablets even though they -- they seem
15 fairly different, and so one source included them. 02:45:25
16 Sorry. Let me look at that and -- and tell you --
17 be more precise what I mean by that.

18 Yes. This is at page 101. There's these
19 two-in-one laptops with detachable screens that
20 is -- one data source are actually included in the 02:45:43
21 tablet market. To be conservative, I included
22 them, but it does seem to me that the form and
23 function is different from Apple's tablets.

24 Q. Are switch devices not mobile devices in
25 your opinion? 02:46:00

A. No. They -- they're, I think,
three-and-a-half times the size, so they don't fit
conveniently in your pocket and they don't have the
same functionality as these mobile devices. You
can't make calls on them. You can only do -- play
games on them, certain more limited functions. So
I would not say they're part of the smartphone or
tablet market.

9	Q. Can Steam be accessed on some tablets	
10	like the Microsoft Surface?	02:46:34

11 A. The Microsoft Surface -- oh. Yeah, I
12 believe Steam operates on any Microsoft operating
13 system or can.

14 Q. Are transactions on the Steam store in --

15 in this mobile -- mobile market? 02:46:50

16 A. On this -- on the laptop you said?

17 Q. On the -- on the -- yes, on the Steam
18 insofar as it's --

19 (Simultaneously speaking.)

20 THE DEPONENT: You said -- you said the 02:47:04
21 Surface though. That's a laptop, not a tablet, I
22 would say.

23 Q. (By Mr. Swanson) And is that your
24 opinion?

25 A. I think so. Yes. Now -- so I -- and 02:47:12

1 this one data source talked about detachable 02:47:17
2 screens. It doesn't seem to me that the Surface
3 really has a detachable screen. So, I mean, having
4 used both of them, I would say they're -- they're
5 very different, the Surface versus a -- a tablet. 02:47:32

6 Q. What would you detach the Surface from?

7 A. We detach it from the keyboard, I guess,
8 if that -- but I -- I don't know exactly what they
9 mean by two-in-one laptops with detachable screens.

10 Q. Uh-huh. 02:47:49

11 A. But maybe they include Surfaces, but I'm
12 not positive that that's what they were including.

13 Q. Would you have -- do you have any Windows
14 tablet in this mobile market?

15 A. The Windows tablets are incredibly small 02:48:02
16 market share, I believe, in this market, so we're
17 -- I have it down here in figure 4 they're -- I
18 guess it's not incredibly small. They're small.
19 They're 10 to 18 percent.

20 Q. So -- and Steam, the Steam store can be 02:48:25
21 accessed on those Microsoft tablets, correct,
22 whatever they are?

23 MR. LOPEZ: Objection. Foundation.

24 THE DEPONENT: I -- I believe so, yes.

25 Q. (By Mr. Swanson) Okay. So are 02:48:39

1 transactions through the Steam store on Microsoft 02:48:41
2 tablets in this mobile market?

3 A. Well, in this overly broadly defined
4 market. I mean, as I say in the report, I don't
5 think that app -- the distribution in this broader 02:49:01
6 market is correct. Here I'm defining the
7 smartphone markets and the tablet markets. But for
8 the purposes of the overly broad definition of the
9 app in digital IAP distribution markets, I'm
10 including the App Store and the Google Play Store 02:49:34
11 as the two providers. They're combined using them
12 as a denominator. And here I -- I'm not
13 including -- yeah, here I'm following, you know,
14 the definition that's also being used by Apple
15 itself in its statements, a revenue share of all 02:50:02
16 app and digital IAP distribution services on mobile
17 devices and including basically Google, Android, I
18 guess, devices and these iOS devices.

19 This other source that I looked at for
20 power in the tablet market, as I said, I think is 02:50:20
21 overly broad, but to be conservative there to find
22 market power, I went with that definition.

23 MR. LOPEZ: I didn't want to cut you off,
24 but I'm going to object again to that question on
25 the basis of foundation. 02:50:34

1 Q. (By Mr. Swanson) My question to you, 02:50:38
2 Professor, is did you include Steam transactions in
3 this mobile market since Steam is available on
4 mobile devices?

5 MR. LOPEZ: Same objection. 02:50:51

6 THE DEPONENT: Well, I -- I don't think
7 that Steam is available on these mobile devices. I
8 think they're only available on -- on the computers
9 that -- one data source, I thought, was incorrectly
10 including certain kinds of laptops in -- in the 02:51:11
11 market and I went through that to be conservative,
12 but I'm not including them for purposes of
13 section -- the -- the section C that goes from
14 pages 102 to 103.

15 Q. (By Mr. Swanson) Well, are you looking 02:51:28
16 at the App Store transactions that could be entered
17 into on these mobile devices or not?

18 A. I -- I wouldn't include them as mobile
19 devices.

20 Q. You don't include Microsoft tablets as 02:51:42
21 mobile devices?

22 A. If it's a true tablet. But if it's a
23 laptop, no.

24 Q. Right.

25 And do you understand that Steam is 02:51:51

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1 available on Microsoft tablets? 02:51:54

2 A. But I think true Microsoft tablets are --

3 are very trivial market share, so that's why I

4 think there's a -- a fine approximation to

5 calculate the share in this overly broad market for 02:52:08

6 all app distribution by including the App Store and

7 the Google Play Store.

8 Q. So you disregarded it because you believe

9 it's a trivial market share? Is that why you

10 didn't include Steam transactions? 02:52:23

11 A. Well, we don't have any good data for it.

12 At least I don't currently. And frankly, if there

13 was, I would include them in this calculation. It

14 would not in any way change the class-wide nature

15 of the calculation. It might change the numbers 02:52:41

16 somewhat, but it would remain the class-wide number

17 in a class-wide methodology.

18 Here I'm just trying to establish this --

19 you know, the existence of class-wide methodologies

20 for addressing the relevant issues on this 02:52:54

21 alternative market definition, that is -- that's

22 one I disagree with.

23 Q. Professor, how does evidence that a firm

24 has been able to successfully exclude rivals

25 directly prove that the firm has market power? 02:53:10

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1 A. Well, unless you have power, you're not 02:53:13
2 going to be able to exclude your rivals, because if
3 you're able to impose a -- a condition that
4 excludes your rivals, you must have enough market
5 power to be able to impose that condition. 02:53:24

6 Q. Can you identify any specific iOS app
7 stores that Apple excluded?

8 A. iOS app stores that they excluded.

9 Well, sure. I mean, I -- because -- what, Cydia

10 was one that had a very high market share and --

11 not high market share. They had a -- a significant

12 amount of sales and, you know, typing exclusivity

13 restraints has sharply reduced those sales.

14 And I think Epic obviously was one and
15 they want to enter into this market, but they're 02:54:07
16 being excluded by the use of restraints. And --
17 let's see. I mentioned another one as well.

18 Yeah, and -- and I -- I would say not
19 that they've attempted to do so, but that Google,
20 Amazon and Steam are all very likely entrants and 02:54:39
21 thus they're being excluded currently by these
22 exclusivity restraints. But in the but-for world,
23 I conclude that they are highly likely to enter.

24 Q. And your opinion is that if Google
25 entered the but-for world, the relevant market that 02:54:56

1 you define would be more competitive, thanks to 02:54:59

2 Google's participation?

3 A. Yes. If Google was competing with Apple
4 in the same market, the -- the market would be more
5 competitive. 02:55:11

6 Q. Have you analyzed whether Apple's
7 30 percent default commission rate was
8 supracompetitive when adopted in 2008?

9 MS. MANIFOLD: Objection.

10 THE DEPONENT: Yes. I think this goes 02:55:28
11 back to the question you raised before. My
12 preliminary opinion is it had monopoly power then,
13 so the price was anticompetitive from the get-go.

14 Q. (By Mr. Swanson) Is that opinion -- does
15 that opinion appear in your report? 02:55:42

16 A. No. As I've already said, it wasn't
17 necessary for any of my conclusions. But I think
18 it would be relevant if somebody tried to make the
19 argument that because it was 30 percent back then,
20 that that's a competitive commission. 02:55:56

21 Q. Are you familiar with the term "critical
22 mass" as it's used in connection with multisided
23 platforms?

24 A. Yes.

25 Q. Can you define the term? 02:56:11

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1 A. Well, since the big issue in two-sided 02:56:15
2 platforms is getting enough -- both sides onto the
3 platform because there's these indirect network
4 effects, you -- you need a critical mass of both
5 developers and consumers to attract each other onto 02:56:29
6 the platform. So you need sufficient ones so it's
7 economic to run the platform.

8 Q. What happens to platforms that do not
9 attain critical mass?

10 A. You -- you don't have enough -- I guess 02:56:46
11 you lose economies of scale and network effects and
12 so you can't operate as efficiently as if you can
13 get the critical mass.

14 Q. Do you agree that an entrant into the
15 relevant market you define must attain critical 02:57:03
16 mass to be an effective competitor?

17 MS. MANIFOLD: Objection.

18 MR. LOPEZ: I'll join.

19 THE DEPONENT: I mean, to be -- to
20 maximize its potential to be effective, it may be 02:57:17
21 they don't get to the critical mass but still are
22 an effective constraint. So, you know, even less
23 efficient rivals can be a competitive constraint if
24 they're in the market. But they wouldn't be as
25 efficient as they could be if they weren't able to 02:57:33

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1 get to their critical mass. 02:57:36

2 Q. (By Mr. Swanson) How long would it take
3 an entrant to attain critical mass in the relevant
4 market you've defined?

5 MR. LOPEZ: Objection. 02:57:43

6 THE DEPONENT: I have not reached a
7 conclusion about that.

8 Q. (By Mr. Swanson) Do you have an opinion
9 as to when the App Store -- Apple's App Store
10 attained critical mass? 02:57:56

11 MS. MANIFOLD: Objection.

12 THE DEPONENT: I -- I haven't reached a
13 conclusion about that.

14 Q. (By Mr. Swanson) Is it your opinion that
15 it happened instantly? 02:58:04

16 MS. MANIFOLD: Objection.

17 THE DEPONENT: I'd have to investigate,
18 but my recollection was it was quite rapid, that
19 the iPhone was out and there was very quickly lots
20 and lots of apps on it and that there was no other 02:58:18

21 real game in town at the time. They were,
22 you know, the market leader in developing this
23 whole -- this kind of smartphone with all these
24 apps on it. So, you know, I think in some ways it
25 was easier in their day because they were the -- 02:58:38

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1 they had the first mover advantage. 02:58:42

2 Q. (By Mr. Swanson) Do you think Apple
3 attained critical mass with 500 apps on the
4 App Store?

5 A. I think it was certainly enough at the 02:58:50
6 time to be able to offer it. I mean, they -- they
7 did offer it and the device was quite profitable
8 from the get-go. So -- I mean, I think critical
9 mass, not necessarily an abstract number that
10 applies no matter what. It may depend upon who 02:59:09
11 your rivals are.

12 So, you know, today to have 500 apps when
13 there's a million apps out there may not be enough,
14 but when you have the first 500 apps, then it could
15 be more than enough. 02:59:25

16 Q. Well, at what point did Apple and
17 Google Play have the same number of apps on their
18 respective app stores?

19 MR. LOPEZ: Objection.

20 THE DEPONENT: I -- I don't know that 02:59:38
21 they have exactly the same number of apps on their
22 two app stores. I haven't calculated that.

23 Q. (By Mr. Swanson) So you don't know
24 when -- when they each had the same number of apps
25 on their app stores? 02:59:53

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1 MR. LOPEZ: Objection. 02:59:55

2 THE DEPONENT: You're having -- I guess
3 you're testifying what's an factual premise that at
4 some point they had exactly the same number of
5 apps. I haven't investigated to see whether that's 03:00:03
6 true or not or -- and I don't really see the
7 economic relevance to this case of it.

8 Q. (By Mr. Swanson) Do you have an opinion
9 as to whether the App Store attained critical mass
10 before or after it attained monopoly power? 03:00:17

11 A. No. I think -- I think for the
12 monopolist, you're the first mover, you have as
13 much mass as is going to be there. So I think you
14 still had a monopoly over the product and I think
15 it's just a matter of building it up over time to 03:00:45
16 be sustainable. But they -- they didn't really
17 have any competition in the very early days for
18 these developers.

19 Q. When -- when, in your opinion, did Apple
20 first have competition for the developers? 03:01:02

21 A. Well, there's never been any competition
22 for the developers on the iOS devices because
23 they had exclusivity from the very beginning, but
24 there could have been. And I guess in the early
25 days, despite the restraints, Cydia was able to 03:01:18

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1 sell to jailbroken phones. So they had some 03:01:23
2 competition there, but it was always dwarfed by
3 Apple.

4 Q. And so your opinion is that Apple and
5 Google were never in competition for developers, 03:01:37
6 even back in the beginning?

7 A. I think so, because developers could
8 always sell apps on both. They -- they reach a
9 distinct and separate group of consumers. So as I
10 explained in my report, it is an economic error to 03:01:56
11 confuse multihoming use of both of them with
12 competition between them or -- because there's
13 not -- they don't indicate substitution. So if I'm
14 a developer and I offer an app on the
15 Google Play Store, it's not going to take away 03:02:12
16 sales from the iOS App Store because a very small
17 number of people even have both phones and probably
18 a lot -- lot of them are using them for different
19 purposes anyway.

20 Q. In the but-for world, is it your opinion 03:02:30
21 that any rival app store will be preinstalled on
22 iOS devices?

23 A. I -- I haven't reached a conclusion about
24 whether they would be preinstalled or just
25 something that could be installed later. 03:02:49

1 Q. Well, in your but-for world, does every 03:02:53
2 rival app store get downloaded by a consumer onto
3 their iPhone?

4 A. Not necessarily. I think it could be
5 some consumers would prefer to just stick with the 03:03:10
6 Apple App Store. And that's fine. That -- that
7 would be their competitive choice.

8 Q. Do you have an opinion as to what
9 percentage of consumers in the but-for world will
10 choose to remain with the Apple App Store and not 03:03:24
11 download an alternative app store?

12 MS. MANIFOLD: Objection.

13 THE DEPONENT: Yeah, I -- I don't. As I
14 say in my report, the -- the -- the harm remains
15 common no matter what the particular consumers or 03:03:39
16 developers would do.

17 Q. (By Mr. Swanson) Well, if a consumer
18 doesn't download an alternative store, then a
19 developer can't reach that iOS consumer, can
20 they? 03:03:54

21 MR. LOPEZ: Objection.

22 THE DEPONENT: Well, they might be able
23 to reach them outside the OS -- iOS device and
24 then they could copy over the iOS app into their
25 iOS device. So that's one possibility. But also 03:04:11

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1 the mere existence of a competitive constraint 03:04:13
2 would lower commissions. And -- and that, as I
3 point out, would likely mean that developers would
4 offer higher quality apps. So those consumers
5 would be harmed for that reason as well. 03:04:32

6 Q. (By Mr. Swanson) Well, if, in the
7 but-for world, 65 percent of consumers don't
8 download -- don't download an alternative app store
9 and 35 percent download alternative app stores and
10 only patronize those stores, will there be 03:04:50
11 competition for developers between those various
12 stores?

13 MR. LOPEZ: Objection and object to the
14 form.

15 THE DEPONENT: I mean, yeah, I think the 03:05:06
16 distributors would still -- well, they could
17 compete. I mean, it -- it would seem to me if
18 that's the case, it would be logical for developers
19 just distribute to the both of them. You don't
20 have to choose one or the other. Just the 03:05:21
21 consumers may choose one or the other if they want,
22 but you want to reach both sets of customers. So I
23 would think that the developers would distribute
24 both ways.

25 Q. (By Mr. Swanson) And that's just like 03:05:33

1 Apple and Google right now, correct, in your view? 03:05:34

2 MR. LOPEZ: Objection.

3 THE DEPONENT: No, I don't think so,
4 because there's not the same potential. You can't
5 run an iOS app on the Android device and you 03:05:41
6 can't run an Android app on the iOS devices.

7 Q. (By Mr. Swanson) But you can run the
8 functionally identical app on either device if
9 you're a developer, correct?

10 MR. LOPEZ: Objection. 03:05:54

11 THE DEPONENT: Well, sometimes it's a
12 different app, though, on -- on the other device.
13 And while its consumers could switch back and forth
14 in this hypothetical world, they could just
15 download the other app distributor rather than the 03:06:07
16 one you hypothesize they pick.

17 You can't just -- you know, unless you
18 have both sorts of smartphones, you can't just
19 switch back and forth. And, you know, only
20 2 percent of people who own an iPhone also own an 03:06:21
21 Android, a smartphone. And of those, some of them
22 at least are probably using them for personal
23 versus work use. So it's not clear even they can
24 substitute usage for the same kind of apps.

25 Q. (By Mr. Swanson) Are you aware that the 03:06:39

1 developer plaintiffs here allege that Apple has 03:06:41
2 abused monopsony power as a bottleneck retailer as
3 an alternative allegation?

4 A. I -- I'm not sure -- I -- I -- I don't
5 recall that. I'm not quite sure what that means. 03:06:58

6 Q. Have you analyzed whether Apple possesses
7 monopsony power?

8 A. I -- I have not. I think -- if I recall
9 correctly -- now, it's been a while since I looked
10 at this -- this is an alternative market definition 03:07:16

11 if you define market differently than one for app
12 distribution and an iOS app distribution and
13 in-app purchases, if you saw them instead as a
14 purchaser. But I -- I conclude it's a two-sided
15 market for transactions, and so I think it's -- 03:07:35

16 given that, it's more natural just to think of them
17 as -- as purchasers and, therefore, Apple as a
18 monopolist. But I guess you could have, you know,
19 alternative market definitions where you view them
20 as a monopsonist who is purchasing developer apps 03:07:54

21 to distribute. That's just not my view of the --
22 of the right two-sided market definition here
23 though.

24 Q. Are the opinions provided in your report
25 valid under both a monopoly theory of harm and a 03:08:10

1 monopsony theory of harm? 03:08:13

2 MR. LOPEZ: Objection.

3 THE DEPONENT: I -- I -- I think so.

4 If -- I mean, I may need to hear more about what,

5 you know, the details are about the monopsony 03:08:22

6 theory. But generally, you know, the fact that you

7 could frame things an alternative way doesn't

8 really change the economic conclusion that they're

9 just flip sides of each other and -- so either way,

10 it's an exercise of power that is raising your 03:08:36

11 overall take of Apple and all these transactions

12 and whether you view them as increasing your take

13 as a purchaser or as a seller I don't think really

14 changes much.

15 Q. (By Mr. Swanson) What is the time frame 03:08:56

16 of your but-for world? Is it 2015 forward?

17 A. Yes.

18 Q. What's the first event in the but-for

19 world that differs from the actual world?

20 A. Well, I mean, we -- we don't have this 03:09:12

21 exclusivity restraint and -- so therefore, we have

22 competition now. I think the competition would

23 exist from the beginning because the constraint

24 lasted, you know, earlier than that. The class

25 period, as I understand it, is just defined this 03:09:24

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1 way because of statute of limitations purposes. 03:09:26

2 So as I understand, you can't go further

3 back in terms of harm and everything. But I think

4 there wouldn't have been these exclusivity

5 restraints for years before either. All I'm just 03:09:39

6 saying is at least by June 2015, we would have had

7 meaningful competition and there would have been

8 lower commissions as a result.

9 Q. Well, when are you assuming that

10 commissions are lower than if it's before the start 03:09:59

11 of the class period?

12 A. In terms of the commissions being lower,

13 I'm saying that's true from at least June 2015 on.

14 I'm -- I'm not -- not necessary for me to reach any

15 conclusion before then because that's not something 03:10:17

16 being covered by this lawsuit.

17 Q. Does your but-for world involve any

18 redesign of the iPhone or any other iOS device?

19 A. No, I don't think so. I think to the

20 contrary, I offer the conclusion that there would 03:10:37

21 be no reason to think that the absence of this

22 exclusivity restraint would lower the amount that

23 Apple invested in its devices.

24 Q. So the identical devices would exist in

25 the actual -- in the but-for world; is that what 03:10:57

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1 you're saying? 03:11:00

2 A. Yeah, I think the devices would be the
3 same. If anything, I think the difference might
4 just be they'd invest it -- with competition they
5 have more incentives to invest in better app review 03:11:10
6 and do a better job of screening out malicious
7 apps. So I think it would be -- the app store part
8 would be better, but the devices, it seems -- the
9 evidence indicates that firms that have no
10 exclusivity in app distribution like, say, Samsung 03:11:29
11 or Apple itself in the Mac market, they invest very
12 similarly in those devices.

13 Q. Would the iOS operating system be any
14 different in the but-for world compared to the
15 actual world? 03:11:46

16 MR. LOPEZ: Objection.

17 THE DEPONENT: I think only in the sense
18 if you couldn't condition it in this
19 anticompetitive way on exclusivity, but I don't
20 think that makes -- means that the iOS itself 03:11:58
21 would be any different.

22 Q. (By Mr. Swanson) Would there be any
23 change in the computer code to permit sideloading?

24 MR. LOPEZ: Objection.

25 THE DEPONENT: So that you have to ask a 03:12:10

1 technical expert whether you need to change that 03:12:12
2 code in order to allow installation of rival app
3 distribution or not. I think, you know, Apple
4 excludes in part through various technical ways,
5 but in part through a lot of exclusionary 03:12:26
6 agreements, as I mention in part 3 of the report.
7 Whether those technical ways count as part of the
8 iOS code or not is something you would have to ask
9 a -- a computer expert.

10 Q. (By Mr. Swanson) Well, what -- what 03:12:42
11 technical ways, to use your term, would be absent
12 in the but-for world?

13 A. Let's see. Well, so for example, in
14 paragraph 251, in explaining how they extend the
15 restraint to in-app purchases and that the other 03:13:47
16 requirement is that developers have to incorporate
17 Apple's IAP/API into programming code in a way that
18 makes the app request that Apple initiate an in-app
19 purchase transaction whenever the user selects a
20 digital good to purchase. So that's a requirement 03:14:05
21 that's causing a technical change in programming
22 code for the developer.

23 Then another example -- I'm not finding
24 the detail, but there was various technological
25 restraints that basically make certain apps expire 03:14:54

1 after -- like one that says seven days -- here, 03:14:59
2 paragraph 273, the technical restraints for free
3 Xcode provisioning make it expire after seven days.
4 So that's a technical restraint that is reinforcing
5 a bunch of contractual restraints. 03:15:14

6 And for -- I can't remember -- one of the
7 other ones had a different length of exclusionary
8 period. And then there are -- yes. To get access
9 to the Xcode that they need in order to write and
10 create new native iOS apps, they have to sign 03:15:37
11 with these Xcode agreements. So they're using
12 their -- you know, control over the Xcode in order
13 to impose that restraint. And the limitations on
14 jailbreaking itself are, you know, in -- in part
15 technological and they've increased the difficulty 03:15:57
16 of jailbreaking over time by how they design the
17 iOS devices and iOS operating system as I talk
18 about in paragraph 280.

19 Q. And in your but-for world, jailbreaking
20 is something that is easy to do? 03:16:17

21 MR. LOPEZ: Objection.

22 THE DEPONENT: Well, in the but-for
23 world, I think -- I think it would have to alter --
24 you could jailbreak it -- well, either it -- it
25 would have to be designed -- essentially you 03:16:34

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